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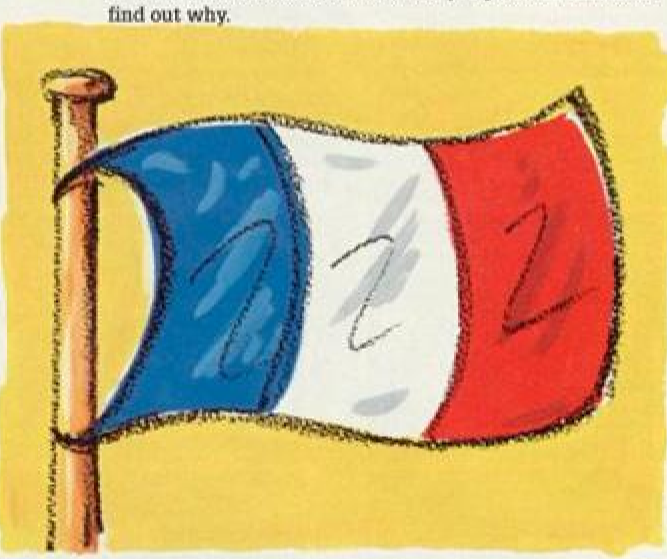
AMSTRAD ACTION ● MAY 1990

FRONT END

NEWS●LETTERS

SERIOUS SIDE

CPC USES●HARDWARE●PROGRAMMING



Future Publishing Limited
Beauford Court, 30 Monmouth Street, Bath, Avon BA1 2AP

Sorry 'n' all that, but we're so busy putting your favourite CPC magazine together, we just don't have time to take all those calls about cheats, listings, best buys and so on. That doesn't mean we can't help you out, though – 'course not! Just send a letter to *Cheat Mode, Type-ins, Forum, Reaction* etc and we'll do our darndest to sort you out...

☎ 0225 442244 ● **Fax** 0225 446019 ● **Editor** Rod Lawton ● **Technical editor** Adam Waring ● **Games editor** Trenton Webb ● **Art editor** Ollie Alderton ● **Additional design** Paul Morgan ● **Contributors** Emma Broadley, Jerry Glenwright, Conrad Bessant, Steve Williams, The Balrog, Phil Howard ● **Publisher** Greg Ingham ● **Production** Melissa Parkinson ● **Admin Co-ordinator** James Leach ● **Subscriptions** Christine Stacey ☎ 0458 74011 ● **Mail Order** Clare Bates ☎ 0458 74011 ● **Advertisements** Elaine Brooks ☎ 0225 442244 ● **Distribution** Comag

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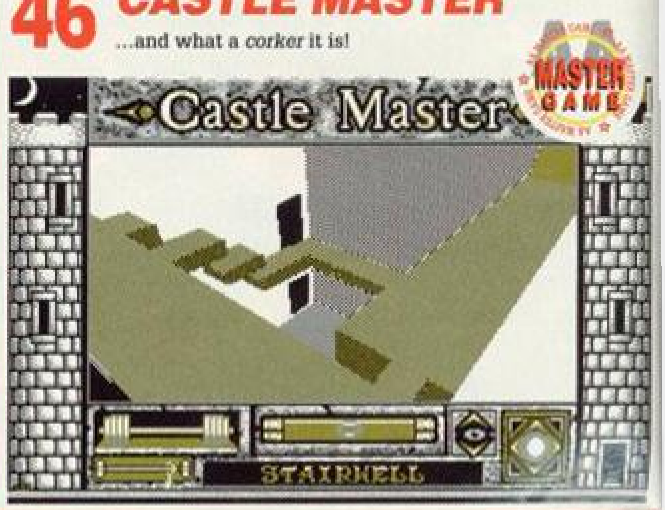
35,064

July – December 1989

THE ACTION BEGINS ON 43!

THE VERY BEST IN CPC ENTERTAINMENT











French Connection

Although the CPC has at times lived in the shadow of the other 8-bit micros in this country, it's taken Europe by storm. Why? The Amstrad CPC is by far the biggest 8-bit computer in just about every European country you might care to mention – most notably our French friends just across the pond. Trenton went over there to get the full low-down on just what makes the French CPC scene so huge, and you can find out for yourself in this special Gallic flavour (or should that be *garlic-flavoured*?) issue. As well as reports on all the top French software houses, there are reports on *AA*'s counterparts across the channel, and even what it's like to be a punter in Paris...

On top of that, we've totally revamped the *Buyers Guide* in response to overwhelming demand. So get stuck in...





AMSCENE

releases... updates... previews... new releases... updates... previews... new

NEW LIGHTGUN DISCOVERED!

Distribution of Loriciel's new *West Phaser* in the UK remains uncertain despite success in France



Loriciel, the software house that brought you *Skweek*, has developed its own CPC-compatible lightgun called the *West Phaser*.

AA unearthed the device while on a fact-finding tour of CPC-packed France. The product was launched last Christmas, and sold in droves over the holiday period.

The package features a gun styled to look like an authentic six-shooter, and a specially-developed game of Sheriffs and saloon shoot-outs. Included for the price of 349F (£35, approximately) were a set of RSXs that allowed you to build *West Phaser* control into your own games. Loriciel has since released a second compendium of games, entitled *Crazy Shot*.

Virgin's territory



When Virgin launched its Magnum lightgun last Autumn, the interest in the product was unprecedented. *AA*'s 'win a lightgun competition' proved to be one of the most popular of the year. Such public support has already prompted three new lightgun-compatible games, which are released this month (see *Action Test* for the full reviews). This follow-up software support proves that 'guns' are no mere fad, but a new and growing sector of the gaming market.

Gunning for Gold?

US Gold has a reciprocal agreement with Loriciel software, whereby the French company distributes Gold software in France and US Gold distributes Loriciel software in the UK. The only way we're likely to see the *West Phaser* over here is if US Gold decides to market in this country. We game Gold a call to find out if they planned to do so...

"We have no plans to distribute the *West Phaser* in the UK at present," a spokesperson told us, "But then who knows? If enough interest is shown we might reconsider!"

Well there you have it. Send your letters, petitions etc to *Amstrad Action* and we'll pass them on to US Gold. The ball's in your court!

You can make your own mind up about the games by turning to page 32, where both *Crazy Shot* and the original *West Phaser* package are on display.

ACU hits trouble



Focus, the publishing company behind *Amstrad Computer User* magazine, is now operating under receivership following financial problems. It seems that all of Focus's titles are now up for sale, including *ACU*, *Popular Computing Weekly* and the BBC's *Clothes Show Magazine*. The future of *ACU* and the other titles remains uncertain at this stage.



THE MOST IMPORTANT MACHINE IN FRANCE?

An indication of the size of the CPC market in France can be gained from the sales figures of top French software house Loriciel. It reckons the percentages of total sales in each major format break down as follows:

Amstrad CPC	48%
Atari ST	27%
IBM PC-compatibles	16%
Commodore Amiga	9%

Now according to even *AA*'s rudimentary mathematics, that means the CPC sells as many games as all the other formats put together!

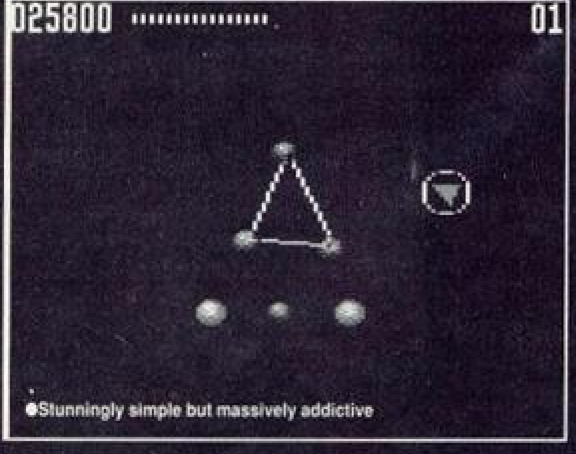
Reasons for the format's success in France are varied. Herve Caen of Titus thinks it's simply because the CPC is sold as a simple, complete, ready-to-go package, while other factors must undoubtedly include the much closer relationship between Amstrad and the press.

The CPC's great popularity on the Continent existed long before news of Amstrad's new console and enhanced CPCs leaked out. Now that Amstrad's plans are becoming clear, the inevitable surge of interest in the format looks set to carry the CPC into the next century!

GOLD GETS E-MOTIONAL!

A 'new age' is dawning in computer gaming. At the vanguard is *E-Motion*, from US Gold. New Age games are supposed to relax and intrigue at the same time. And from the demo *AA* has seen, we can vouch for the intrigue, but aren't so sure about the relaxation!

In *E-Motion*, you must shepherd various-coloured molecules about a wrap-around screen using *Blasteroid*-style ships, getting them to collide before they go critical and explode. As you might imagine, though, things aren't that simple – if you get to same-coloured balls to collide they cancel each other out, but get two different-coloured balls to bash together and they produce a third particle. You've got just a few seconds to collect it before it transforms from a valuable energy pod into another horrible full-sized ball...



●Stunningly simple but massively addictive

It's one of those games that takes a little while to learn, but really puts the hook in once you understand what the heck's going on.

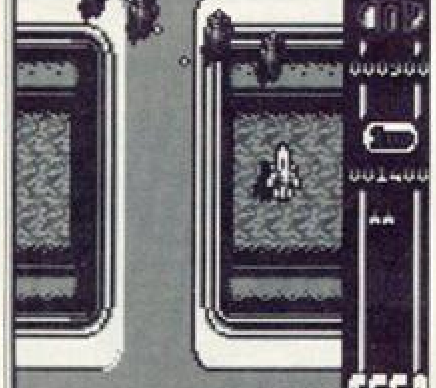
A revolutionary concept you, quite literally, haven't seen a game like it and *AA* will have the full review next month. It's often been said that computer games are only any good when they feature guns and violence, all spiced up with a bit of titilation on the box. *E-Motion* looks set to change that, as there's not a gun or girl in sight. And it still looks brilliant!

Sonic attack

From Activision, the company that brought you *Afterburner*, comes the latest high-tech airborne blast, *Sonic Boom*.

Based on a Sega arcade game, this baby's a vertically-scrolling rip snorter of a shoot-em-up. Low on the IQ level, it may be, but it's high in the action stakes.

As a mild-mannered pilot going about his business, you must fly over a number of hostile countries destroying armies and the territory's economic infrastructure. You get the chance to blow up huge oil terminals in the Middle East and trash trains in America (*that's the way to do it! – ed*). The flight log will be ready for inspection next month.



● Flying high with *Sonic Boom*

World Cup Carnival

As the teams limber up for the World Cup finals in Italy this summer (that's a football tournament, Rod!), the software houses are drawing up their squads too.

First into the fray was Virgin with *World Cup Soccer '90*. Its game will have a host of new features including close-up goalmouth views to aid both strikers and goalies. More teams are expected to be announced soon by US Gold and the other top software sides.

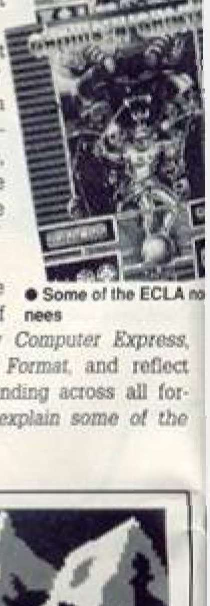


ECT, etc, etc..

The European Computer Trade Show (1st-3rd April) is the spring shop window for games and all manner of computer goodies. The first such show last year was a great success, with previews and releases galore as companies fought to grab the industry limelight. Everybody who is anybody will be there for this software spectacular, so that means *AA* too, and we'll bring you all the news as soon as possible.

Already lined for preview/release are *Manchester United* (Krisalis), *Rogue Trooper* (Krisalis), *Stormlord II: Deliverance* (Hewson), *Yogi's Great Escape* (Hi-Tec), *Hong Kong Phooey – Number one Super Guy* (Hi-Tec), *Laws of Chaos* (Bladesoft), *Fire and Forget II* (Titus) and *Pipemania* (Empire). So the summer looks set to be hot one.

Also of interest to games-minded folk are the European Computer Leisure Awards – as mentioned last issue. The national votes are now in and these decisions have been put forward to a panel of European judges. The UK's results were as follows: Best Sound – *Ghouls 'n' Ghosts* (US Gold), Best Action Game – *Batman* (Ocean), Best Arcade Conversion – *Strider* (US Gold), Most Original Game – *Stunt Car Racer* (Microprose), Best Flight Sim – *F16 Combat Pilot* (Digital Integration), Best Sports Sim – *Kick Off* (Anco), New title with the most chart potential – *Rainbow Islands* (Ocean), Software Publisher of the Year – Microprose, Game of the Year – *Kick Off* (Anco).


● Some of the ECLA nominees

These awards were decided by the staff of *AA*, *Your Sinclair*, *New Computer Express*, *Amiga Format* and *ST Format*, and reflect games that were outstanding across all formats. Which may help explain some of the apparent anachronisms.

Hewson go 4th!

Hewson, purveyor of quality software since the year dot, hase prepared a new compilation for your delight and delectation. *4th Dimension* features – you've guessed it – four games, three of which are brand new, previously unreleased titles!

Battle Valley, *Herobotix*, *Anarchy* and *Supercup* are the games, and they should be hitting a shop near you soon. Bearing in mind the past Hewson successes – *Stormlord*, *Cybernoid I* and *II*, *Nebulus* etc – it should be worth the wait.



● Battle Valley, part of the 4th Dimension

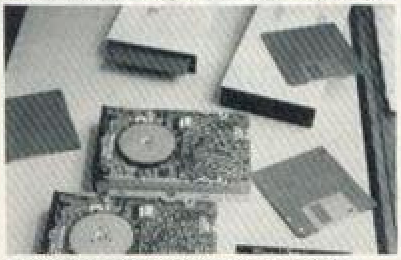
PC-CPC FILE TRANSFER – THE LATEST

Remember the item we printed in *Amscene*, *AA54*, about the new Siren utility for reading and writing to PC format disks? I bet you're wondering what's happened to it, aren't you? Well the latest news from Siren is that the program is finished and going on sale even as we speak. Look out for the full review in *AA* soon.

...In the meantime, PD library and all-round good deal merchant *WACCI* has uncovered a stonking little utility from north of the border.

MFU (*Multi File Utility*) lets users transfer files from IBM PCs, BBCs and a whole host of other highly esoteric formats. The program was first written some three years ago by Moonstone Software in Scotland, but has since drifted into obscurity – until rediscovered by *WACCI*. Moonstone have moved on to the world of the PCW now (*boo! hiss! – ed*), but have agreed to let WACCI distribute the CPC version of *MFU*.

Price will be in the region of £35-40, which sounds pretty hefty until you find out what's included. *MFU* is more than just a file transfer program, containing as it does such additional goodies as a disk sector editor ("quite funky": *AA* Tech Ed Adam Waring). You also get a 100-page manual which not only tells you how to use the program but gives you a detailed run-down on disk theory as well. You'll be reading the review just as soon as we can get our hands on a copy...



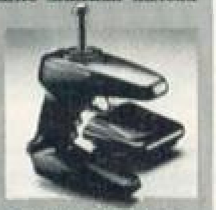
● Read those PC disks, with two new utilities

Look – no wires!

Joystick giants Spectravideo are launching a brand new joystick – that works by infra-red!

It's true. The Spectravideo IR works just like a TV or video remote control, sending infra-red signals to a receiver – in this case a control box plugged into the back of the CPC. The great advantage is, of course, that you don't have wires trailing all over the place. In addition, Spectravideo claims that the joystick will work at a range of up to 30 feet, and that you can even play games while walking around the room!

The only problem is the price. At £39.95, the Spectravideo IR Infra-red is about four times the price of conventional wagglers. But then if it means you can lounge in your favourite armchair instead of being hunched up in front of the screen, it could be a bargain! It also looks cyber enough to make all the other kids on the block go green with envy...



● No strings attached

British Music Fair – sounds good!

CPC musicians who have been following James Pinto's series on MIDI should take themselves along to the British Music Fair 1990, being held at Olympia, London between the 17th and 22nd of July. Exhibitors include Casio, Kawai, Roland and Yamaha as well as many, many more covering the entire music industry. And if you can't make it to London on those dates, the show will be at G-Mex, Manchester, between the 5th and 7th of October.



All's Fair



Did anyone manage to get along to the first All Formats Computer Fair on 10th of February at the New Horticultural Hall? Apparently several thousand keen computer users did, and the event was judged such a success by the organisers that there's going to be another one!

The next AFCF will be held over the weekend of the 28th/29th April. As well as offering bargains galore for visitors, the fair looks a good deal for potential exhibitors, too, with stands going for as little as £120 each (call 0225 447453 for details) The New Horticultural Hall is in Graycoat Street, near London's Victoria Station.

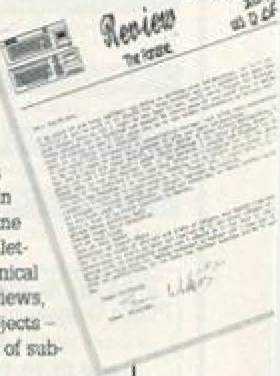
Nits in shining armour

Incentive and Domark are taking their new game, *Castle Master* (Mastergame, this issue), a little seriously, we think (see accompanying photo). Ian Andrew was straight on the phone as soon as he found out we had the picture, though. He explained that he'd never done anything like that before (honest, M'Lud), that the picture was taken in Fulham Palace Church, that the knights' costumes came from *Monty Python and the Holy Grail*, and that the princess's frock was actually Mark Strachan's nightie. He also reckoned that the shot was taken to celebrate the launch of *Castle Master*. Strange, he made the whole thing sound almost plausible...



●Just another day at the office for the Domark and Incentive boys

New fanzine



Review is a newly-launched CPC fanzine, the brainchild of a certain Mr Simon Williams from Hednesford in Staffordshire. The magazine will include a news section, letters, machine code help, technical tips, games and serious reviews, adventures and hardware projects – as well as articles on a range of subjects.

Price will be 50p plus postage, and the first issue should be rolling off the presses about now. You can find out more from Simon by writing to: **24 Chalcot Drive, Hednesford, Staffs WS12 4SF**.

REACTION

Another bulging mailbag spills out over the ed's desk...

● CPC-ers unite!

I'm sure most CPC users have heard the phrase, "My 6128's better than your 464", but really all we're doing is arguing amongst ourselves. Shouldn't we instead be "united"? After all, we are all Amstrad users.

But what would be the consequences of dropping the 464? Well, the 464 itself serves as a low cost entry into the computer world, as not all of us can afford a 6128 straight away. If we didn't have this low cost entry surely the Spectrums and Commodores would take over? Well, almost – the 6128 *is* slightly expensive.

I'm glad that, over Christmas, Amstrad realised the potential of the CPC. But what on earth possessed Amstrad to advertise the Spectrum on television but the CPC in the press? I'm sure that the CPC is about a thousand years ahead of the Spectrum in terms of sound and graphics.

Anyway, on the subject of the 464/6128 "divide", what if Amstrad dropped the 6128? As most *AA* readers know, the 6128 can be used for almost anything from running a small business to controlling a space station (well, on the same lines anway!) and will continue to be used as it has excellent business software and word processors available for it. But to put it in simpler terms, the 464 needs the 6128 to survive and the 6128 needs the 464 to survive. In my opinion, anyway.

And – is original software becoming a thing of the past? We've all seen budget versions of hits from yesteryear and compilations compiled from these. Even though they are excellent ways to buy games that you maybe missed first time round, it is a bit unoriginal. I've nothing against these games as I sometimes buy them myself, but I think they are pushing original budget software "out of the chute". It also means, in theory, that there would be a slight drop in full price sales as people wait until they are released in the £2.99 sector. I think, however, that most people enjoy an original release every now and then.

I'm also pleased with the quality of CPC software lately, as more and more programmers begin to make full use of the CPC.

Keep up the good work at *AA*, as I think it is a professionally put together magazine – which is more than I can say for others.

Simon Lee
Newcastle-upon-Tyne

AA: Your argument that the 464 and 6128 need each other is a very good one. Certainly, there must be many 6128 owners out there who'd never have bought their machines if they hadn't "got into" CPCs with a 464 first. And when the new machines come out in September, if – as the reports suggest – they both come equipped with a cartridge port, then the ROM-based software will run equally well on both machines, regarding the difference in their memory capacities. The 464 will be the poor relation no more!

● Manual found

In *Reaction, AA53*, someone is seeking a CPC464 manual. We have such a manual and if your seeker could contact us we will let them know how to get it.

Cyril and Nora Teather,
31 Coney Acre
Rickling Green
Saffron Waldon
Essex CB11 3YQ



● Drive dilemmas

As a newcomer to the world of personal computers (I have an Amstrad CPC6128), and a new subscriber to your monthly magazine, I have one or two queries:

1. Much abounds in the form of adverts for the 800K 3.5-inch disk drive, complete with RODOS, RAMDOS, ROMDOS. I am perplexed. Could you please enlighten me on these extras – how easy/difficult, benefits etc. Any literature (in noddy terms) would be wonderful.

2. As a person who wants to utilise my computer for serious applications more than a games machine, what benefit could be gained by the 3.5-inch disk drive over the second drive



● What are the advantages of a 3.5-inch drive for your CPC?

3. I use *Mini Office 2* quite a lot, but see that there are many word processor, database and spreadsheet disks that are very expensive (comparatively) – for these applications would I need extra memory?

4. Dk'tronics advertise 256K expansion – once again, would it benefit me?

5. Your suggestions on literature (above the users manual) that may be good for my continued learning curve in computing.

6. How close are we to being able to use our CPCs with IBM-compatible software, and would the cost be viable (or would the likes of a 1512 be cheaper)?

J Varley
Stevenage

● Addresses please...

I would like to get my nephew a 3.5-inch drive for his CPC6128. On page 32 of *AA50* I read about MGT's Lifetime Drive. I also see several others advertised. Could you please supply me with the address of Miles Gordon Technology? Also, Dart Electronics (Dart Scanner) and Rombo Productions (Vidi Digitiser). Phone no's are quite suitable in the country of origin, but phoning up from here in Australia is expensive

Austin Mullins
Australia

AA: Anything to oblige our Antipodean pals – nice to know AA reaches all corners of the globe! The addresses you want are as follows:

- ***Miles Gordon Technology, Lakeside, Phoenix Way, Swansea Enterprise Park, Swansea SA7 9EH.***
- ***Dart Electronics, Unit B5, Oulton Works, School Road, Lowestoft, Suffolk NR33 9NA.***
- ***Rombo Productions Ltd, 6 Fairbairn Road, Kirkton North, Livingstone, Scoltland EH54 6TS.***

AA: The advantages of a 3.5-inch disk drive over the Amstrad's 3-inch units are storage and cost. A 3.5-inch disk can store up to 800K, while a 3-inch disk can store a maximum of only 360K. And while 3-inch disks cost around £3 each, 3.5-inch disks can be bought for under £1.

However, to use a 3.5-inch disk drive to full capacity, your Amstrad needs special disk operating software – and this is where RAMDOS, RODOS etc come in.

For your purposes we wouldn't really recommend you buy a 3.5-inch disk at this stage – unless you are regularly finding yourself running out of storage space on your Amstrad's 3-inch disks. And although the 3.5-inch disks are cheaper, you can buy a lot of 3-inch disks for the price of the special disk operating software needed!

With the Dk'tronics 256K expansion, again we wouldn't really recommend it for your purposes. All the commercial software you describe will run on your 6128 without expansion.

We can't really recommend further reading, as you're not specific as to where your computing interest lies. Our best suggestion – dare we say it – is to keep on reading AA...!

Finally, I'm afraid the CPC will never be compatible with PCs. The machine is built

completely differently. If you do want access to PC software in the future, you'll simply have to go out and buy that PC1512.

● Past its use-by date

The program 'Calendar' by J Kenworthy in the March 1990 issue, page 63, doesn't work. This comes as no surprise because it is essentially a copy of the calendar program '1988' by T Spence in the Christmas 1987 edition, page 27, which didn't work either.

Both these programs were not tested properly on known data, or perhaps their authors didn't have enough knowledge of calendars on which to base their tests. Any reader using them is bound to feel a little frustrated by now.

If you print this letter and the accompanying amendments it will put an end once and for all to people sending in Calendar programs which are useless. All of the following is based on producing a calendar for England; a Continental calendar is possible with slight modifications.

The first point to note is that the formula for the starting day of the month in line 400 only applies to years from 1753 onwards, and the formula for leap years in line 380 only applies to years from 1799 and below, so in fact the program in issue 54 will work correctly if the entered years are restricted from 1753 to 1799.

The next point concerns leap years. Without going into too much detail, the following facts are relevant:

In 46BC Julius Caesar defined the first rule that an extra day was to be added every fourth year, and this standardised form was called the Julian Calendar. This kept the calendar correct quite well, but not well enough, and by 1582 the date by the calendar was 10 days in error from what it should have been. In that year Pope Gregory the 13th decided that the very next day following on from Thursday 4th October would be Friday 15th October, and introduced two more rules for leap years to make sure that this kind of correction wouldn't be necessary again for a long time. This new system was named the Gregorian Calendar. For one reason or another, Britain kept to the old Julian system until 1752, when Parliament ruled that the day after Wednesday 2nd September was to be Thursday 14th September.

The last point concerns the upper limit for the input year. Without going into a lot of calculations, the three rules we now use for leap years are based on cycles of 4, 100 and 400 years, but this still allows an accumulation of errors to creep in. By about the year 4000 a fourth leap year rule will have to be invented, and around 88000 a fifth, and so on. As nobody today knows what will happen in 2000 years' time, the upper limit year for any calendar program or algorithm is 3999.

As points of comparison between the published version and the corrected version, run both separately with the following: Enter 1000 and look at January; enter 1752 and look at September, October, November, December; enter 1900 and look at February.

DELETE:

line numbers 330, 340, 350 and 400

ALTER:

```
200 LOCATE 24,4:PRINT"ENTER ANY YEAR FROM 1 TO
    3999"
220 IF y<1 OR y>3999 THEN 210
310 j=(((m-1)MOD 4)+1)*20
320 WINDOW #0,j-19,j,1,9
380 n(2)=28+(-(y MOD 4=0)-(y MOD 100=0)-(y MOD
    400=0))MOD 2
390 IF m>1 THEN FOR a=1 TO m-1:d=(d+n(a))MOD 7:NEXT
430 PRINT FNp$(5);
450 IF j<>80 THEN 530
```

In DATA lines 540, 550, 560 alter days to SUN,MON,TUE,WED,THU,FRI,SAT.

ADD:

```
165 DEF FNp$(b)=CHR$(31)+CHR$(((a\7)MOD
    b)*3+5)+CHR$((a MOD 7)+3)
381 ce=(y-1)\100:ye=(y-1)MOD 100:d=(78-
    2*ce+ce\4+ye\4+ye)MOD 7
382 IF y<1753 THEN d=(5+y+(y-1)\4)MOD 7:IF y MOD
    4=0 THEN n(2)=29
391 IF y=1752 THEN IF m=9 THEN 580 ELSE IF m>9 THEN
    d=0-3*(m=11)-5*(m=12)
580 FOR d=1 TO 7:LOCATE 1,d+2:PRINT d$(a):NEXT
581 LOCATE 6,5:PRINT"1":LOCATE 6,6:PRINT"2"
582 FOR a=4 TO 20:PRINT FNp$(50);a+10:NEXT:GOTO 450
```

AA: Ah. Yes. We wondered who would spot that.

● A man's world – or is it?

All right. It's been said before, but it does need reiterating. Why no female images in the magazine? I understand photographs of individuals are usually male, being the brains behind the programs etc, but the graphic images as in "AA goes on-line", March '90 issue, all featured small boys with their keyboards.



● Is *Amstrad Action* just another bastion of male-dominated imagery?

My 9-year-old daughter, upon seeing this, immediately asked if girls can't do computing, which is rather ironic as she is the one who uses our 6128 the most.

I know that this is a male-dominated industry – however, this should not be reinforced by unthoughtful images.

A female image in a thoughtful role, not just as victim in a game, but as a user of computers, would help countless women/girls in the role play. There are many female readers of your magazine who would be very grateful if you could broaden your ideas regarding them.

No, I'm not a militant feminist, just a mother trying to raise two children – one of each sex – and to give to them the full confidence that they can enter any field they choose, not just the traditional ones which have been deemed fitting to their sex.

I hope this letter will provoke some reaction.

Hilary Sleiman
London

AA: Guilty as charged! The accused, in their defence, point to their magazine's role as a reflection of the readership's nature, but also accept their responsibility as agents of social change. They also wish for 12,632 similar offences to be taken into account...

Fair enough, they were all lads, weren't they. The trouble is, we get so little correspondence from female readers, it's tempting to think there aren't any at all. So write in! I mean, is there anyone out there...?

● Size-ist remarks

I am writing about the likelihood of being able to buy a 5.25-inch drive for my Amstrad 6128.

There seems to be an almost infinite variety of 3-inch and 3.5-inch drive units, but I have seen no advertisements for the 5.25-inch drive units. Is there some factor that I am blissfully unaware of?



● What do you do if you want to use 5.25-inch disks with your CPC?

I have considered buying a different machine, but it seems a shame to change as I am very satisfied in all other respects with my 6128.

A Hughson
Etwall
Derby

AA: If you really want a 5.25-inch drive you can get hold of one from Siren Software (061 228 1831). You don't say exactly why you want to use 5.25-inch disks, though. The size is an old one, and it surely won't be long before PC manufacturers themselves jack it in in favour of the much more up-to-date 3.5-inch variety. Could it be that you either have large numbers of 5.25-inch disks already or you just like the fact they're cheaper? Either way,

changing your machine is a pretty drastic step!

● A series for beginners *please...*

After getting my first computer for just under a year, I found that the manual for the 6128 very puzzling and hard to understand. Come on, help me out. I really want to get into computers by starting on the 6128. Why put a load of rubbish that no-one can understand in manuals? Please help with clear explanations on words, commands etc by putting a beginners' section in your brill mag. I mean, how did all those people get to understand it and do wonders on their computers? It would be really nice to place that section so that others can program things too.

I really, really want to do something that works on the Amstrad, hacking and all that. You were a beginner once, remember, about 40 years ago! (Sorry – my mistake!) When are you going to put a *new*, new section in, because I haven't been buying *AA* for very long and there is nothing for beginners...

AA: OK, OK, we get the picture. Anyone else out there think we ought to run a series for beginners? Just write in and tell us and who knows – if we get enough letters we might just go ahead and do it!

● Complaining about complaints

I am writing, not for the first time, on a subject that editors of computer magazines seem bent on ignoring, including your predecessor.

We are all familiar with the not-infrequent letters of complaint against a software house, or hardware supplier; all of it, I do not doubt, fully justified, if my experiences are anything to go by. Letters of praise, however, appear to be conspicuous by their absence. As I have written several times in this vein, without a single word appearing in print, the subject is obviously considered irrelevant and unimportant. Not controversial enough, perhaps, unlike some of my previous correspondence?

So, for the benefit of fellow-consumers, and good suppliers alike, I am going to offer, yet again, names of firms worthy of the highest possible accolade – the WACCS Shield of Honest Endeavour (made from the finest-quality organic tissue paper and biodegradable Plasticene; no expense spared). They are given in no particular order of preference.

● K & M Computers, run by Ken and Margaret Fairhurst. A solidly reliable, warm-hearted and friendly family firm that falls over its collective feet to satisfy its customers.

● US Gold. A company that solved a problem for me with extreme alacrity, and generosity "...above and beyond the call of duty".

● Accolade. As US Gold, this firm was swift to respond, through the good offices of one Matthew Spoll – so swift, in fact, I received a package by first post *the very next day* following my telephone call. After a second 'phone call I received *another* package. The problem continues, but I am confident of their ability to sort it out, eventually.

● Microstyle. This firm, run by none other than your own Phil Craven, has suffered from a certain amount of published adverse comment on the small matter of delivery. While I concede a little patience may sometimes be necessary, you can at least rely on Phil to come up with the goods in the end. I have found him to be friendly, co-operative and ever-ready to help out to the best of his not inconsiderable abilities. What more can you ask for? One word of warning, however. He is an engaging conversationalist, to the delight of British Telecom. Just make sure the ball (or bill) is not in your court at the time.

● Nemesis. Colin Harris, the proprietor, is an absolute boon! He has never refused to tackle anything I have thrown his way – and he usually succeeds.

● Rob Baxter. Not, strictly speaking, a company, but I include this gentleman for a very good reason. If some of your readers who possess Rainbird's *Advanced Music System* have not heard of Rob, then it is about time they remedied the situation. An acknowledged expert on the system, his advice is always invaluable, and he is ever happy to help sort out any entanglements one might experience. Furthermore, he has brilliantly transcribed for the CPC an enviable number of classical works, which should be a "must" for any self-respecting *AMS* owner.

There you have it. The fact that some of these people, originally total strangers to me, have now become friends on Christian name terms, speaks for itself. I can wholeheartedly recommend any or all of the above-mentioned companies/individuals for service that is exemplary.

If this letter is published, I will have returned good for good and, hopefully, some of your readers will have cause to thank you.

Wm ACC Smith.
Windsor

AA: We'd print more letters of praise if more people wrote them!

● I want to write games

Would you please supply me with the information to help me create my own computer game. I have been looking in the shops for computer games to play on my Amstrad 464 and noticed the games' graphics. If I were to design and produce a video game I would like the graphics to be No. 1. I would also like the sonics to be No. 1 as well, and be heard clearly. So please could you tell me how to produce my own computer game?

Drew Richardson
Hairmyres
East Kilbride

AA: Are we psychic or what? Just turn to page 32 of this issue for the first installment of our exclusive, definitive AA guide to producing your own mega-game...

● RSXs revisited

Re: Andrew Manning's queries – p20, March edition. If Andrew can get hold of a copy of the May 1988 edition of the now defunct *Computing with the Amstrad CPC*, he will find a couple of programs by Ian C Sharpe which together set up two RSXs to format and verify disks. The programs therefore only need to be run once after the machine has been switched on or reset and remain available for direct use or use within another program.

Locomotive BASIC programs cannot be run from within CP/M but the Graduate Software ROM upgrade allows CP/M programs to be run from within a BASIC program. Both CP/M and BASIC, however, to all intents and purposes perform a reset on first entry.

John R Hudson
Huddersfield

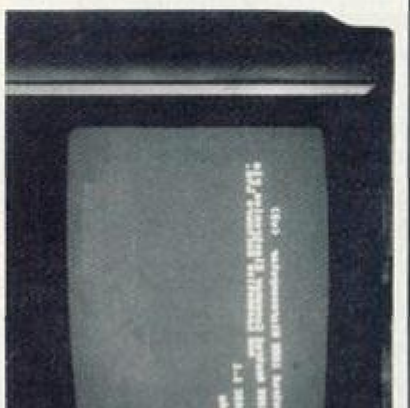
● Sideways scroller?

About 4 minutes, 22 seconds ago, I had an amazing idea that will revolutionise the games world! It will make me millions of quid in royalties, and I'll become famous overnight! Well, that might be a slight exaggeration, but here it is:

Why don't the games manufacturers write games sideways! All you have to do is turn the screen on its side, and you have a much taller playing area to use. It would have to be clearly stated that it was a sideways game on the packet, but it wouldn't be too awkward. It would have enhanced games such as *R-Type*, *Ghostbusters II* (first level) etc. The joystick movements could easily be changed to suit. What do you think?

Tom Kennedy
Exeter

AA: We think you're mad. Anyway, how do you know we're not going to nick your idea, pretend it's ours, and rake in the millions of quid ourselves? Come to think of it...



● What a wonderful idea – write vertical-format games for monitors on their sides!

BROADLEY



SPEAKING

EMMA BROADLEY gets excited over the new CPCs, and gets some of flak over her ST comments...

Chatting to Trenton just the other day, I was struck by how differently Amstrad has treated the French market to its domestic one. In particular, Amstrad France has supported the leading French CPC magazine – *Amstrad Cent pour Cent* – right from the start, and the benefits are plain to see. Not only is the CPC right up there as the leading games computer in the country, Amstrad itself has a far more up-to-date and 'hip' image – largely through association with the magazine.

So what went wrong over here? Most people's image of Amstrad over here is of a rather aloof, uncaring organisation that seems to barely tolerate the CPC rather than actively promote it. By contrast, Amstrad in France is a much higher-profile, and much happier organisation. It's represented by an omnipresent crocodile, toothily grinning away at the readers in half a dozen pages of France's top CPC mag. Amazingly, in France Amstrad is trendy!

Really, looking closely at the French market, it's hard to imagine that their CPC machine is the same as ours – but it is. The difference between the markets is, I suspect, nothing to do with the CPC at all, but with the Sinclair Spectrum. For whatever reason, Amstrad has decided to push that old machine to the fore in the UK at the expense of the CPC. It could be that Amstrad has in the past made heavy financial committments to the Spectrum, or that it genuinely believes the Spectrum is the better entry-level home computer. Either way, the French experience only serves to demonstrate what the CPC could have been over on our side of the channel if only Amstrad had done things differently. It's a sad loss for us UK users. And it may well prove a sad loss for Amstrad too.



● France's *AA* equivalent, *Amstrad Cent pour Cent magazine* – also Amstrad France's all-round advisor and guru!

Rot sets in

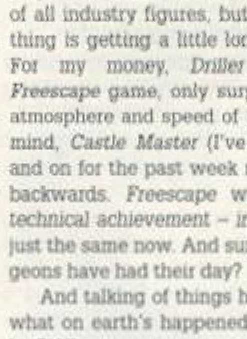
Talking about the CPC, I've got to stick my oar in yet again about Amstrad's console plans. Now I realise most people in the industry think that consoles are the coming thing, but surely they're in danger of forgetting about the traditional home enthusiast? Consoles are strictly one-way things, there's no learning, no interaction with the hardware – none of the 'suck-it-and-see' learning excitement that I associate with my early computing days.

On a broader note, Amstrad would do well to remember that it launched the CPC as a business/leisure machine. If Amstrad starts touting the CPC purely as a games machine, it's going to lose a lot of faithful adherents. More importantly, it might lose the support of those few software houses still producing quality serious programs. I'm all for introducing computers into as many homes in the country as possible, but not simply as dumb entertainment devices with no other purpose...

Incentive to change?

Just how long is Incentive going to milk *Freescape* for, I wonder? I don't mean any disrespect to Ian Andrew, who is one of the nicest of all industry figures, but... well... the whole thing is getting a little long in the tooth now. For my money, *Driller* was the classic *Freescape* game, only surpassed by the extra atmosphere and speed of *Total Eclipse*. To my mind, *Castle Master* (I've been playing it off and on for the past week now) is really a step backwards. *Freescape* was a commendable technical achievement – *in its day* – *but looks* just the same now. And surely castles and dungeons have had their day?

And talking of things having had their day, what on earth's happened to the budget market? All we ever seem to see these days are re-releases of old full-price games! In my book that's nothing but a swizz. If nothing else, people who bought games at the full price are going to find they could have got them for a quarter of the price if they'd waited. And I remember the time when the budget market was full of innovative, original product. Some was genuinely bad, admittedly, but there was a lot of good stuff too. Much of it worthy of full-price release, though of course publishers can be notoriously hard to convince that a genuinely new and original idea is worth the risk. There are a lot of good, talented programmers out there who are never going to get a look-in, simply because budget houses are now content to churn out repackaged oldies instead of promoting original product.



● *Hopping Mad* – yet another budget re-release of an old game.

Barbaric sequel

I see that *Barbarian III* is shortly to hit the streets – I suppose we'll have to wait and see whether Palace uses the ridiculous Maria Whittaker to sell the game again.

Mind you, she's not as ridiculous as the people who think up these bits of 'artwork' – or, for that matter, the people who are swayed by it. I'm not arguing the case on feminist grounds, either. I think it's more of an intellectual problem – the burgeoning of the *Sun* mentality, whereby publishers cater for the lowest common denominator and let the rest look after themselves.

Then again, *The Sun* is probably the best-selling newspaper in the country, so you could argue that it's hit the perfect formula. On the other hand, you could also argue that the Great British Public is being brainwashed by mindless tittilation. It would be a shame if that mindless tittilation took over the computer industry too...

END OF AN ERA?

"Who is this Broadley woman, and what is she doing writing in your magazine?" asks Mr P Booth of Cheltenham. "She is boring, opinionated, and totally out of touch with the readership."

"I've got nothing against Ms Broadley personally," claims Ray Baxter of Durham, "but all she ever seems to do is rehash all the old arguments. I mean, we've heard it all before!"

"Get rid of Emma Broadley!" bellows Erica Vaughan of London, quite simply.

...Well, are you all expecting me to blow my top? No. I think maybe the time has come for me to bow out. I've been doing this column for long enough, I think. Rod's still trying to talk me out of it, but for now I'll be handing over my page to some other worthy cause. It's been fascinating reading your mail – both good and bad! – and fascinating too gaining an insight into the world of magazine publishing. And who knows, maybe I'll be back one day. But for now, ciao...

CAN YOU HANDLE IT?...



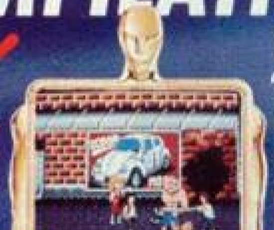
...THE GREATEST COMPILATION EVER!



BATMAN THE CAPED CRUSADER
"Believe me this is brilliant, a finely-honed arcade adventure which is the best comic licence ever – you'd be batty to miss it." CRASH SMASH.



OPERATION WOLF
"What more could anyone ask for in a shoot-em-up. Operation Wolf, simply is The Business." CRASH SMASH.



DOUBLE DRAGON
"Skilful programming has taken the superb graphics and addictive game play of the monster arcade hit and faithfully reproduced it on the home computer."



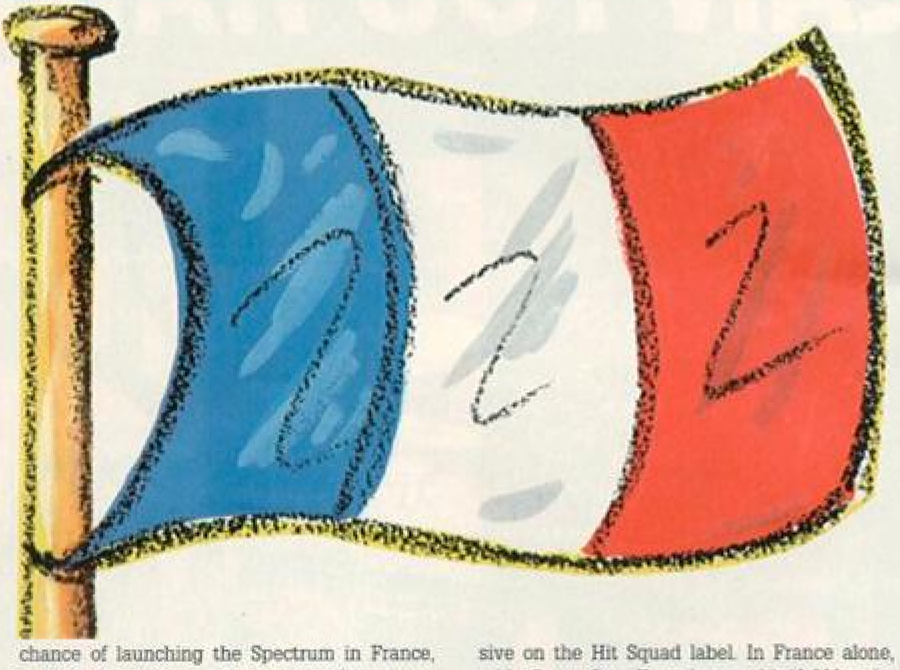
R-TYPE
"Here at S.U. we think it's about as close to an ultimate space blast as anyone will ever get. Fab." SINCLAIR USER.

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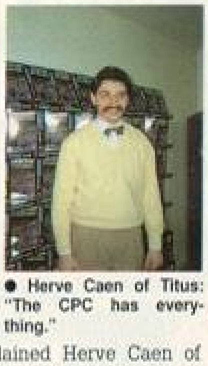
In France, CPC games sell as many copies as all other formats put together! That's what the figures from Loriciel said. Surely shome mishtake? So we asked *Amstrad Cent pour Cent* (*CPC, geddit? – ed*) its circulation and were stunned to find it regularly sells 50,000 copies a month! It had be a mirage – surely the CPC couldn't be *that* big over there? But then UBI Soft's big break in games came with *Fer Et Flamme*, a game only ever released on the CPC! Our information couldn't be a right, could it? We decided to check it out, asking all these major players, and more besides, what lay behind this French computing revolution. They had only one name on their lips – *Amstrad*!



The figures are impressive, really impressive, and so wildly different from the UK's that at first they're hard to believe. Last year alone, 110,000 CPCs were eagerly grabbed from the shelves by French computing fans, and over the years in excess of 650,000 machines have found their way into hearts, minds and homes throughout the country, earning the CPC in France the kudos and clout it so rightly deserves. Indeed, in excess of 50% of all games sold are CPC format (80% of those being on disk) which leaves Amigas, STs, C64s, Speccies and PCs alike trailing in its wake...

Why me?

So why has the CPC taken such a stranglehold on France? After all, in Britain, it's been outplayed by computers of inferior spec, and outsold by machines of higher price...



● Herve Caen of Titus: "The CPC has everything."

"The CPC was successful here (in France) because it was a simple computer to use", explained Herve Caen of Titus. "You had one plug and three wires, whereas for the C64 you had almost 10 cables. The CPC had everything, even a built-in tape or disk drive, by far the best concept. It was a brilliant computer to sell to people who didn't know anything about computing".

This user-friendliness, though, is only part of the story. When the computing boom began, France was dominated by the Thompson, a native machine that has since faded away. It was never sold outside France, and was incompatible with other machines used by European enthusiasts. Meanwhile, Sinclair stood no chance of launching the Spectrum in France, lacking the necessary expertise or finances to build up an international distribution network. Commodore's C64 had a troubled time and was never pushed effectively in France. The field was thus clear for Amstrad and the CPC to make their mark.

The French were ready for a strong computer that doubled as a colourful and adaptable games machine. Amstrad France rapidly built a solid team of marketing and sales people, and the rest, as they say, is history. The machine made possible the rapid growth of software houses, which were now no longer starved of export opportunity.

The French software scene that grew up did, however, exhibit disturbing signs of sanity. It stuck to the CPC, refusing to be led astray by market gossip, following its instincts instead of fickle computing fashions.



● Eric Caen: The 8-bits are "just getting started."

"Three years ago, when were really just getting into our stride, the other software houses said don't do any CPC games", recalls Eric Caen of Titus. "Now the market's only for the US Golds and Oceans, the CPC market is finished, you must work on STs and Amigas! We thought why? There was a giant hardware base all over France and we knew we could create better games than had been done in the past, so we'd try it."

"'The CPC market is dead! You must work on STs or Amigas!'... we thought, 'Why?'"

Crazy sales II

Their instincts were proved right with *Crazy Cars I* and *II*. "*Crazy Cars* was massive, and is still massive on the Hit Squad label. In France alone, with *Crazy Cars II* we have sold 42,000 units on CPC! I think it's the biggest seller ever for the format". A strong enough indicator in itself, Eric felt, that the 8-bits were just getting started. With support like this from all the big guns of France, the machine just carried on growing, as its software base got better and better.

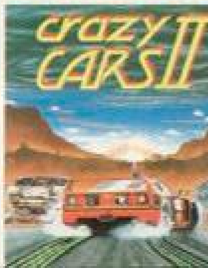
Eric went on: "There has been a war now for nearly three years, with people saying '16-bit will kill 8-bit'. 'Amstrad are going to have to launch a 68000 machine or they'll lose their market'. This is true in Germany, but not in the UK, where the Spectrum is the strongest machine. In France our Spectrum is the CPC".

"In France, our Spectrum is the CPC."



On the game

French games are typified by innovative and high-quality coding. Think France, and what's the answer? *Purple Saturn Day*, with its mind-blowing graphics, *Titan*'s super-smooth scrolling, *Crazy Cars II*'s overscan intro screen, *Skweek*'s perfect blend of cute graphics and evil gameplay. All are examples of French software that crossed the waters just last year. They are, however, the tip of the iceberg compared



The French Revolution!

with the vast number of home market products that we never see.

The vast user base in France means that there is a huge pool of technical talent on tap when it comes to breaking down the barriers of programming. For example, last Christmas, while Virgin was touting its Lightgun in the UK, a totally different 'gun' was being marketed by Loriciel, one that allowed you to write your own interactive games!

French software publishers, while not short on originality, do seem rather lacking on the numbers front. They are subtly different, too, in their reliance on original product instead of the staple British fare of licences.

Different forces explain these quirks. Loriciel feels the reason the UK has seen so few of its games is that: "We've many products that wouldn't fit into your market. The English aren't into shoot-em-ups very much any more, but the French market is very much more arcade-orientated. We design first for the French market, then if it fits in we'll export it". *Skweek*, a Loriciel game, is a prime example of a game that fitted.

French adventure

Amstrad Cent Pour Cent – France's leading CPC magazine – sees it somewhat differently, though, as editor Pierre Valls told us: "French games are more adventure/arcades like *Captain Blood, Defender of the Crown, Iron Lord*, while on the English side it's more shoot-em-ups. English game designers think more about the playability then their French counterparts. The French software houses, however, like Titus, are more inventive with techniques like their overscan screens, good graphics, good programming. The French are more creative but they don't have the same size staff as in the UK. They only release one or two products a year and not twenty or thirty for all formats."

The above opinions explain the nature of French games, but they do not explain the shortage of software houses. There are only a few principal players on the French scene – Titus, UBI Soft, Loriciel Infogrames and the slowly-emerging Coktel Vision.

"The reason for the smaller number of games companies in France", explains Titus's Herve Caen, "is that we are only now starting to be a big enough market, and it's very protected market. There's no budget market here, no market for weaker titles. If you don't have strong marketing or a product that catches the people's imagination, then it just won't sell".

Indeed, it's the lack of a budget market that seems to have delayed the British 'style' explosion in the number of smaller successful software publishers. Without this area it would not have been possible for the like of Codemasters to even consider starting its own company. Thus the stakes are higher, which generally means fewer, but frequently higher-quality, games than the plethora of releases witnessed here in the UK – hitmaking, in France, is imperative.



● French software houses favour arcade/adventure style releases.

Common market?

"The market's very, very protected by distributors' chains, advertising is very expensive in the magazines. Promotion is a lot more expensive than in the UK, and because the market's smaller you've got no choice, you've got to have a success."

The relative youth of the industry also explains why, in France at least, software isn't following the licence trail: "Licences are good, because even without a disk in the box it will sell. When the *Batmans* and *Outruns* are released, it's less overall risk for them. It's more of a financial risk, but less of a success risk. You can be sure a *Chase HQ* will always sell. It's harder to do a program that comes from nowhere, and harder to do the creative work, but we prefer it that way." That's Titus's approach, and it typifies the overall French software perspective.

FAITHFUL AMSTRAD

Amstrad has proved more faithful to the CPC in France than here in England, supporting the machine with both TV and magazine ads. And guess what, sales have continued at an incredible rate...

The star of the CPC, and indeed most Amstrad products', advertisements is a cuddly crocodile who wears all kinds of kit to sell Uncle Alan's machines. This readily-identified character is undeniably a cutey – but would you choose a small-brained, cold-blooded reptilian predator to represent your business on national TV?



Until recently the French games industry lacked the financial resources to even consider buying licences. Now that some software houses are in a position to do so, though, they still prefer to spend money on development time, than a famous name to stick on the outside of the box.

Disk-cussion

The lifeblood of the CPC, and the major reason for the success of the machine, has to be the users, who not only supply the games machine with a steady supply of programmers, but who buy all the hard and software too. With 80% of the games now sold on disk in France, this points to the huge number of 464 owners who have upgraded their machine at least to disk drive standard. *Amstrad Cent Pour Cent* understands that most of its readers too have worked their systems up to colour.

And the main computing interest across the channel is in gaming. Technical and serious users are far from ignored – take *Discology*, for example – but are definitely secondary to those who use the CPC as a tool for leisure. *Cent Pour Cent's* success (and games page count) demonstrate the trend. It was born as a magazine to bring humour into a market that had become increasingly 'techie', and its sales steadily climbed as the games grabbed the limelight.

The users themselves are very different to those in the UK. "User groups are not very dynamic here, but in France what is important on Amstrad is fanzines. We receive about three new fanzines a month. We have a big collection, they thrive in France. It's very important" – *Cent Pour Cent* again.

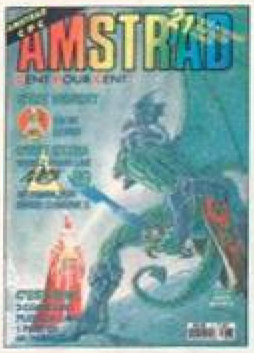
These fanzines tend to sing the praises of games, and are filled with games hints and tips rather than the intricacies of machine code or the wonders of an RSX.

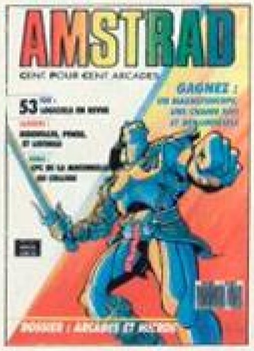
Pirate clans

The degree of communication between users, however, has led to one small problem. It's the same one that's been plaguing Britain recently – piracy. "In France, all the software houses are fighting it. We've lots of lawsuits against people and organised piracy in France. It's very developed here and there's even been mail-order catalogues. We caught one guy and he had a real organisation – all the most recent software, and was selling it at very high prices. After the lawsuit he even asked one of the companies, as he owed them so much money and knew everything about protection, whether they could hire him to pay off the debt and give them hints." This just one of many examples software house Loriciel was aware of.

"The major problem we've got in France is piracy!" exclaimed Titus's Herve Caen. "Its amazing. We tried to arrange meetings with pirate groups, talk to them. They say "you are making money and we don't have enough to buy your games, so we just hack them!" We reply that that they are starving the games companies of money and that maybe they'll work in the games industry one day, and they reply. 'It's tomorrow, we don't care.'" Piracy, it seems, is international problem.

The CPC has survived better in France than in Britain, but why? Again, the responsibility lies with the users of the machine in France and their powerful financial clout. Pierre Valls of *Amstrad CPC* threw some light on the subject, identifying Amstrad France as much more publicly responsive than its British counterpart: "In France, like England, they stopped advertising the CPC in favour of the PC, but here they rapidly realised it as a mistake. Amstrad France were trying to change their





● *Amstrad CPC* – *the* French CPC magazine.

MINITEL

One thing you can't help noticing in France is its Minitel network. In many ways it's just like our own Prestel, only many, many times bigger. It's a bulletin board of sorts that, for the price of a terminal, lets you access a huge range of services.

You can do the shopping, book tickets, even enter competitions and ask questions of software houses like Virgin, which runs its Sega club on it.

Best of all, though, is the ability to use Telechargement. This little ad-on to your Minitel allows you to download games directly from the bulletin board (it's what those *Amcharge* files you sometimes find tucked away on tape software are for). You simply dial up the board, select one of the many games and save it to your CPC! Darned clever these Continentals, you know!





● Just a few of the French releases heading our way.

ET LES JEUX ANGLAIS?

Games from England are distributed in France by the main French houses. Titus already deals in Empire software but has recently started handling Anco too. To publicise the event, Titus held a national computer football tournament of *Kick Off* – a storming success by all accounts.

Meanwhile, UBI Soft looks after the likes of Activision, Domark, Mindscape and Grandslam, to name but a few of its 27 labels!

Loriciel is the other major player, and it looks after US Gold and Ocean. Microprose and Virgin are two publishers who have set up shop on their own and look to be making a go of it!

The smash hit of recent months has been *Rick Dangerous*: "It was ideal for the French market, we went nuts about it. The French love games that require strategy like that!" It's reached the stage now where the massive CPC market means that some games written in the UK for British companies are now being released in France before they hit the streets here!

image towards a more professional one, so they stopped advertising the games side and home computer side of the CPC. But three months after, they realised it was a mistake and came back to the games image, and will continue to do this with the future machine, the new CPC."

Name game

"Amstrad at one time were considering changing the name on the CPC in France from Amstrad to Sinclair to help promote the sales of PCs. Sinclair had the better games name and they wanted to give the Amstrad a more professional name. Now maybe it's the other side of the coin!" – *Cent Pour Cent*'s Pierre Valls jokingly suggesting that if they changed the badge on the Spectrum to Amstrad from Sinclair, it would boost French sales!



● The CPC's a strong seller in France – and getting stronger.

But what future is there for the CPC in France? "Amstrad is very powerful here, and the CPC will continue to be powerful just because of the number of machines", offered Loriciel. "In the next few years Amstrad will still be a big player with its new machine and should remain at around about 40-50 % of the market." Was Titus's opinion. "We are very interested in the new CPC and will do good things for it. We are very confident, because the console market is hard now because the Japanese are controlling everything. As Europeans we feel we can't support it, and its the same with all the major European software houses. We can't do more than a certain number of titles a year, we can't chose the titles we put out out we can only propose. We need a European standard console!"

"We need a European standard console"

Console yourself

The success of the machine in France may have been the central reason for Amstrad eventually looking more favourably on its CPC goldmine. The CPC's strong user base and continued sales made the 'CPC Plus' look viable. Add to this the growing demand for a European, non licence-based console/computer, and things look pretty rosy for the CPC and it's new offshoot. With the software system, even if it is cartridge based, open to anyone to work on – unlike Sega's and Nintendo's systems – it looks as if Amstrad has made one of its famous incisive marketing moves, and could



● Two French blockbusters which shook the world.

take the summer market by storm.

"It's a a good strategy from Mr Sugar. He wanted to stop the rise of the console in Europe, but he doesn't want to start a war with the 16-bit manufactures. It's between 16-bit and console and that's the future market, because the new machine will have the performance of both the 16-bits [computing wise] and the consoles [games wise]." That was *Amstrad Cent Pour Cent*'s opinion, a magazine whose dominance of the French magazine market looks more certain than ever.

The new machine should help boost further the CPC's considerable sales: "The chain store retailers don't react as quickly as the rest of the of the market. So before they realise that they could have moved to 16-bit, Amstrad will be calling them this summer saying 'this is a new CPC machine' and they'll move, selling this new machine because it has worked in the past and made them lots of money." That was one software house's view of the ever-brightening CPC situation.

"France has been the proving ground for the CPC. It provided Amstrad with both the confidence and cash to build a new machine"



Fun in the sun

Add the French experience to the great success of the CPC in Spain and Greece, and you begin to see the machine as *the* European computer. With the backing of a strong marketing and sales team it, has taken hold of these countries in a way few of us in Britain even dreamed was possible. The fruits of this success are now beginning to filter back across the channel to us in the form of excellent games, the best of which look yet to come (*see the previews on pages 32-36! – ed*). "It looks like being a hot summer", ventured Eric Caen of Titus. We think he may be right. And on the CPC – especially in France – it could well be a *hit* summer, too!

SHOP CITY!

So where do the French buy all their software? Most important of all to software purchaser is FNAC, a sort of record-cum-comic-cum-software shop. They're in every French town bigger than a hamlet and provide a huge range of software for all machines and always stock the latest releases.

Slowly building up its empire is Virgin (one day its shops will make MacDonalds look scarce). Virgin has just opened a prestige Megastore on the Champs Elysees, which has a massive basement full of computer goodies. There are rumours that three more Megastores are in the offing and if the crowds fighting for room in the current one are anything to go by, then they won't be far off.

That's not all, though. Shops don't suffer from the techno-fear that they do in the UK. You can buy your CPC or games for it at any of the big chain stores, or even when you pop down to the supermarket for some munchies. Both Carrefour and Conforama (hypermarket chains) stock the system. So if you want to wash down your escargots with a game of *Iron Lord*, then it looks like France is the place for you!



● An FNAC shop. They're found in every French town, and sell records, comics and games.



● Virgin's new Megastore on the Champs Elysees.

FORUM

No problem too great, no question too daft, no stone unturned... ADAM's your man.

● Leading Question

I am writing to you for help. I have just bought a DMP 3000 printer to use with my Amstrad CPC464. Great, I thought, except the printer cable supplied is no use and I have to purchase an RS232 cable to be able to use my printer. Why can't they supply the right cable? None of my local stockists have them or can get them. I would like to have printed this letter, but I can't.

P Yates
Sheffield

The cable supplied with your printer is a standard Centronics printer lead. The fault is with the CPC rather than the printer, I'm afraid. To keep down costs, Amstrad decided to use the edge connector rather than a proper printer socket. It's not really fair to blame printer manufacturers for supplying the 'wrong' cable, when they are giving the majority of people the right one (I realise that it is Amstrad who manufacture this particular printer, which only goes to show that they should have provided a proper connector on the CPC).

However, it is not an RS232 cable that you require, it is a CPC Centronics printer lead called the Amsoft PL-1. Perhaps this is why your local stockists were unable to help? If you still have no luck in your area then you should be able to find one through the adverts in Amstrad Action.

● To the point

Just bought my first computer (CPC6128). Good do, eh? Tried the 'Organ' Type-in on page 63 (*AA*54). Managed to get past all the 'Syntax's' (if thats the correct plural) only to find: No sound, can't use the keyboard to play. Appears to play on its own.

Please advise Mr Waring.

W Hudson
Leigh

Your typing Mr Hudson. Syntax errors indicate incorrect spelling. Rectify. Program will work.

● Keying instructor

I would like to congratulate you on your excellent Christmas cover tape. While playing through the tape I discovered your Word Processor. Great, how does it work? Don't say LOAD"READ.ME", believe me I've tried and it doesn't work. Please help me.

Mathew Trip
Hornsea

On pages 18 and 19 of the issue to which the cover tape was attatched are instructions on how to use the programs on the tape. I think your problem is that you're trying to load the "READ.ME" file directly into BASIC. Try loading it into the word processor itself, like the instructions tell you to.

● Profitable pastime

For a while now I have been thinking of making games and selling them for a small price. In the past issues of AA there has been an advert for *Pandora* made by Swift Software. Are there any programs that are better than Pandora? Do I have to have a good knowledge of machine code? Is this a good start for first time programmers? Also I have seriously thought about setting up my own software company and selling my product for a small profit, through mail order etc. Is this very advisable and possible? Do I need any legal protection? How would I go about this?

Paul Hinchliff
Ipswich



● Write your own Mega - games

Sprites Alive is Pandora's competitor, and whilst I'd hesitate to call it 'better', it is a totally different system. Sprites Alive is an extended BASIC designed for writing games, whereas Pandora is a compiled language. Which one you'd use depends on your individual preference. You don't have to know machine code to use either package, but if you're serious about writing games then you really ought to get into assembly programming. The packages are not really suitable for 'first time' programmers. If you know BASIC well then you should be OK, but I wouldn't describe either of them as suitable for beginners.

I wouldn't really advise setting up your own software house, either —not as a career at any rate. If you just want to make a few quid through small ads in your spare time then fine, but don't expect to make your fortune.

Legally, everything that you write automatically becomes your copyright. And you are required to declare any money you make to the Inland Revenue.

As it happens we are starting a series on writing your own games this month. Check it out on page 30

● Eraserhead

When erasing a Multifaced game, don't bother to use |ERA to get rid of every file in turn – wipe them all at once with the following:

```
|ERA,"filename?.BIN"                (6128 users)
a$="filename?.BIN":|ERA,@a$         (464 users)
```

Make sure you include the '?' after the filename as this is the wildcard for the numbers which follow the name on each file.

David Carter
Woking
Surrey

Thanks Dave. Consult your manual for more details about wildcards.

● Hear this

I notice that every other month in your magazine someone asks why they can't use headphones in the CPC I/O socket. This is the answer to all their problems.

I use a stereo amplifier kit from Maplin Electronics. It comes with either headphones or speakers, and prices which include P+P are:

Amp and headphones	£15.95
Amp and speakeres	£17.95
Amp and deluxe speakers	£19.95

M Pinder
Preston
Lancs

I'm positive some of our readers will be glad to hear this, and I'm sure that Maplin will be too. The number is 01 748 0926.

● Vorsprung durch technik (probably)

Hejsa Inge!!

Jeg har set dit brev i AA, og selvom jeg ikke selv har en AMSTRAD printer, kan det godt være, at jeg kan hjælpe dig.

På min egan printer (en STAR LC-10), er der en funktion der hedder "Select international character set". D.v.s, at man kan vælge det engelske tegnsæt unden at skulle pilleved DIP-kontakterne. Kodener denne: print#8,chr$(27);chr$(82);chr$(3).Den er til det engelske tegnsaet. Vil du have det danske tilbage, skal du undskifte 3 tallet med 4. Håber du kan bruge mit tip!! (Du er

velkommen til at skrive til mig, hvis der andre problemer.)
Hilsen:

Torben Jensen
Bladstrup Bygade 6
5450 Otterup

Ah... Does anyone know anything about:
(a) Danish DIP switch settings
(b) Danish character sets
(c) Danish?

● ULA failure

I noticed in your letters page a query which you failed to answer fully, about the use for an AMSTRAD 40010 socket on the CPC464 board. This socket was added to newer versions of the 464 printed circuit board to accommodate the re-designed ULA which was, I believe, changed to reduce heat dissipation caused by minor design errors on the original device. If a fault occurs in the ULA (IC116), the replacement part is 40007 (with heatsink – older version) or 40010, and it should be noted that the correct device MUST be fitted or several component changes will also be required.


Get your chips out............

Andy Worrall
Bexleyheath
Kent

So now you know.

● Worried about nothing

Please try and sort out this problem for me. If I type:

```
10 CALL &BCEF
20 CALL &BCF2
```

I get a syntax error in line 61216 which reads:

```
61216 PLOT UPPER$<>PLOT
```

What does it all mean? I'm going out of my head with worry with this one!

James Barker
Cudworth
S Yorks

Well Jim, you're calling a couple of firmware routines that should only be accessed from machine code. The routines which require certain registers to contain certain values – impossible to do from BASIC. Hence it is acting on garbage. As the old computer adage goes: "Garbage in, garbage out."

If really that worried about the results then don't do the calls. However, it isn't going to hurt your CPC.

● Mission impossible

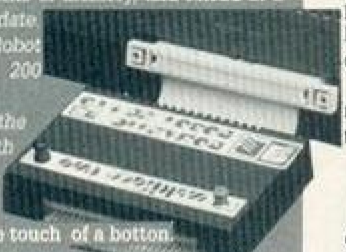
I have a challenge for your readers. Can anyone write a program that enables you to pause a game at any time and record your present position? I am fed up with reaching high levels in games like *Gauntlet* and *Krakout* or playing games like *Rebelstar* and finding I do not have enough time to finish my game. Then I have to switch off and lose everything.

I also need a poke to disable the ESC key.

David Hayes
Glasgow

I don't think it would be very easy to write a program to do what you require, but fortunatley Romantic Robot produce a hardware device that should suit your needs. The Multiface II plugs into the back of the CPC and programs can be 'frozen' at the touch of a button. From this point you can save the entire contents of memory, and reload at a later date. Romantic Robot are on 01 200 8870.

Disable the ESC key with POKE &BDEE,201


● All at the touch of a botton.

● Rolling it in

Help! At the moment I'm doing a computer course in college and within the next month we will be getting a computer programming project to code a payroll. This means that I must have at least four files open on disk at the same time so I can write to and read the different files. I don't want to use arrays if I can avoid it. Is there any way to do this?

Stephen Howard
Dublin

The file handling commands OPENOUT and OPENIN can only be used to work on one file at a time, so the answer has to be no.

However there are ways round this. If you make sure that you close each file before opening another then you can store as many as you like on disk. I don't understand what you have against using arrays, but if you wish, you can write different variables to the same disk file.

● Disks of death

Whilst looking through some of my older disks, I discovered some programs I had written five years ago when I first had my Amstrad. I tried to load these files, of the type .BAS and .BIN, but I got the message FILE TYPE ERROR. So I got out my trusty *Discology* and examined the files. I discovered that they were ASCII files with a length of zero! What has happened to my files? Can I recover them? So far this only seems to have happened to my older disks (*Dragons Lair*, *TLL* and my own BASIC and machine code programs) but I am worried that all my important software is going to go down the tubes. My computer is a 6128.

Stephen Trimmer
Buckingham

How odd. Perhaps you have discovered the first CPC virus (joke – don't panic)! Five years is a long time. Could your disks have been exposed to some strong magnetic fields in that time? All I can suggest is that you back up your important software and keep your disks in a safe place.

● Press gang

In the March publication of *AA*, in the *Forum* section, Bálint Joó from Aberdeen wrote in to ask whether screens saved with Multiface II could be loaded into *Stop Press* with the use of a program.

Well, from my experience, you can load them straight in to *Stop Press* using the LOAD MODE 0 and MODE 1 options. Mode 0 usually produces the best results, and then you can INVERT the screen with the CLEAR PAGE option.

You can then touch the picture up with the magnify facility, and then print it out. I hope this has been of some use!

Johnathan Smeed
Worthing

Good show Johnathan, I'm sure that Bálint will be well pleased.

● Coded disks

I am 14 and I enjoy computer programming but this problem draws the line.

I have been trying to find out how these big companies make their disk protection on some of their games. When you type CAT or DIR, the screen clears and produces a fancy name and tells you how to run the game – not showing you any files. Please could you help me because I would like to do the same on some of my disks.

D J Williams
Camberley
Surrey

This effect is produced by the disk containing strange control codes in the directory area.

When the computer attempts to catalogue the disk it tries to print these codes, which have the effect of clearing the screen and changing colours. There are still files on the disk, but the computer doesn't actually get round to printing them on-screen.

● RSXs barred

I am a Danish boy with a CPC6128, a 5.25-inch disk drive, a Star LC-10 and a tape recorder. I read your magazine every month (I subscribe), and I just love it.

A year ago I started to teach myself some machine code. I have a few books about machine code on the CPC, but there is one thing that I can't find anywhere: How do I use RSXs in machine code?

Yes, I know you have printed two pages about RSXs in issue 54, but I think that you've

forgotten one thing: How do you execute the RSX from machine code. (You can't put |disc or a |fade,0,9 into source code.)

I hope you can help me!

Torben Jensen
Otterup
Denmark

Good idea to subscribe, Torben, many of our overseas readers complain that AA costs the equivalent of around £4 on the continent, so it's by far the cheapest (not to mention the most reliable) way to get your copy.

The point about RSXs is that they make machine code routines easier to access from BASIC programs. Saying that you can't use them from machine code is a bit like saying that you cannot use BASIC commands in COBOL. If you want to use routines that have had an RSX put on then you'll have to strip out all the RSX code first.

● Say hello

Please help me, I bought a DMP 3160 printer for my 6128. In the manual that came with it, it says to type LPRINT"HELLO" as a testing instruction. When I typed this it came up with a SYNTAX ERROR.

I then loaded up *OCP Art Studio*, drew a little picture and went to print it out. It printed perfectly. I reset my computer and tried out the command again, but it still came up with Syntax Error.

What am I to do? I have asked around at places like Dixons where I bought the printer, and all they could suggest is that I should consult the manual – but it says nothing.

I'm sure that there is nothing wrong with my computer or printer. I think that there is another command to make it print.

Simon Powell
Upminster
Essex

You're right, Simon, the CPC does use a different command to LPRINT. Instead of LPRINT"HELLO", use PRINT #8,"HELLO".

Printer manuals have never been the most understandable of publications. The manufacturers tend to be very general when describing commands to use from computers. LPRINT is a very common method of outputting text to the printer, but the CPC uses a more flexible method called Streaming. The advantage of this is that output can be directed to different devices by simply changing the Stream number in the print command. For instance, #0 sends to the screen, #8 the printer, and #9 a disk file.

You'll have to refer to your CPC manual about sending information to your printer, and the printer manual for specific details of control codes and the like.

● Getting shirty

I use a CPC6128 with *Tasword* as my word processor. I also possess most of the Tasman software including *Tas-sign*.

I find that using *Tas-sign* I can design a



● **Make your own T-Shirts.**

logo in mirror image and by using a *heat-sensitive* printer ribbon that I can transfer this to material such as a T-shirt.

What I am enquiring, either from you or your brilliant readers is: Can a supplier of heat-sensitive ink be found to enable me to charge my old ribbons from my DMP2000 printer? At the moment I am recharging my old ribbons with Caspells 'Refresh', which I can thoroughly endorse, but this is obviously no earthly use for the transfer to another base.

Bob Jeffery
Bournmouth

What an interesting use for the CPC! Anyone know of a heat-sensitive ink supply? By the way, Bob, being a fashionable sort, I usually go for an extra large in T-shirt sizes... (I think that was a hint – ed)

● Word processor for beginners

My sons and I love your magazine, I turn straight to your pages for help and have been helped. Thank you.

But now I need your help in a big way. My son of nine is dyslexic, but very intelligent. He has a hard time with the written word, and an even harder time spelling it.

Our computer is a CPC464. It's the best thing we ever bought our sons, aged 11, 9 and 5. I don't know anything about computers really, but I am learning.

We tried a word processor, but it's too complicated for me, never mind a 9-year-old. We need something simpler that can correct the spelling instantly.

I hope you can help us with this technology at our fingers. You would make life easier for thousands and thousands of dyslexics.

Margaret Quinn
Sale
Cheshire

There is one word processor I'd recommend without hesitation, apart from one thing - you need a disk drive to use it. That program is Pendown. *It is an excellent beginners' package, featuring friendly icons (pictures) to indicate options and a what-you-see-is-what-you-get (WYSIWYG) display. It has a dictionary you can compile yourself to check your spelling and is billed as an 'educational' word processor.*

The price is £20. If you really wanted to use this package then you'd have to buy a disk drive costing another £150. Expensive for just a word processor, but of course a disk drive is useful for many other purposes. I'm not aware of any tape-based word processors suitable for your specific needs. If anyone knows of one, please get in touch with me.

Logotron, the publisher of Pendown, *can be contacted on 0223 323656.*

CRACKING THE CODE

Muddled by machine code? Hung up on hex? All your machine code queries answered (in strictest confidence of course). Simply write to *Cracking the code*, Amstrad Action, Beauford Court, 30 Monmouth Street, Bath, Avon BA1 2AP. Sorry, we can't reply personally, we can only print answers in the mag.

● The shape of things to come

I must say that I have only one grumble about my 464 – the shape. If you look at most of the other 8 and 16-bits you'll notice one major difference between them and the CPC. Their cases are sleek and steamlined, and they don't have bright red and green keys (I'm talking about the 464). Even the C64 and the Spectrum have smooth cases, the C64's being the smoother.

The only thing dated about the 464 is the shape! Are there any alternative cases or plug-in keyboards, as there are for other 8-bits?

Speedball is a fantastic 16-bit game. My brother has it for his ST and it's excellent, so why isn't it available for the world's greatest compy? I've seen the PC graphics (four colours) so they shouldn't be a problem. OK, so it'll be a bit slower, but we don't mind. I would rather play it on the CPC...

Jeremy (Tumnus) Graham
Newcastle-upon-Tyne

When the CPC first came out, the 'chunky' look was quite trendy. Pity you can't say the same nowadays...

Mind you, the Commodore 64 first came out looking like a prop from a fifties sci-fi movie, and as for the Spectrum – well, it was all right if you'd upgraded from a calculator...

Since being launched, though, both those machines have been restyled. Perhaps the CPC's time will come with the new cartridge-based machines reported in last issue (AA55). As far as I know, there aren't any replacement cases for the 464.

Mirrorsoft says that it doesn't have any plans to convert Speedball *to the CPC. Then again, that's what they said about* Xenon...



● **Ugly, or what**

CHEAT MODE II

At last – the moment you've all been waiting for – *Cheat Mode II* is here! 130 pages crammed to bursting-point with completely crucial gamesplaying low-down on *three years'*-worth of CPC classics. And *boy*, was it worth the wait...!

On the front of this month's *AA* there's a quick taster of the new *Cheat Mode* book, doing the dirty deeds on 50 all-time fave games.

Yes, it's true – the complete cheat sheet is here with the launch of *Cheat Mode II*, the collected wisdom of over 33 issues of *AA's Cheat Mode* (issues 17 - 50). But there's more.

As well as our published cheats, hints, tips and playing guides, we've picked the experts' brains clean for some extra pokes that are exclusive to *Cheat Mode II*. Expert pokesters Mike Wong, Phil Howard and Graham Smith have all applied their specialist hacking skills to bring you almost 150 previously unseen gamebusting listings. And there's even more.

To save time typing all the listings, *Cheat Mode II* comes with cassettes tapes containing every poke in the book, all of which easily transfer to disk. Cheating's never been easier, free at last of the "Syntax error" nightmare that haunts so many nights of home typing.

So what do you have to do? Well, *Cheat Mode II* retails at £9.99 – or £11.99 with the two cassettes – plus £1.45 post and packing.

Simply fill in the coupon below and within days you'll be the owner of the essential gamesplayers guide.

Remember, cheats may never prosper, but when the dust settles they're the only ones left standing...



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AA SMALL ADS

For Sale

CPC464 Colour Monitor, disk drive, Multiface 2, dust covers, A.A. Issues, 16 onwards, manuals, books, 70+ games on tape and disk, blank disks. Phone: 01 567 1221 evenings, sorry, no split.

CPC464 Colour Monitor 2 DDI disc drives, few games, good condition. Phone: Ray (0603) 620478. £380 buyer collects. 3 Duckett Close, Norwich, NR1 2LR.

THE programme for small business accounts - many features - 6128 disc - if you need to save time and trouble on bookwork - phone for full details. A.B.C. Software (0934) 516714. Introductory offer £23.00 inc. VAT.

AMSTRAD CPC464 various game programmes (tape) including Gunship, Operation Thunderbolt and various strategy games and home office utilities £75 o.n.o. Ring Clive 01 366 0769 after 7.30pm.

COLOUR Monitor, Amstrad CTM644-2 £70. Second drive FD1 with cable £55. Both little used and boxed. Telephone Colwyn Bay (0492) 47813.

GHOST House - Amazing adventure, very difficult. Also Egbert - arcade game. Many utilities including improved Splitmodes, see March 1990 £6.99 disc, £4.99 tape. Cheques: Mr. A. Price, (AA) 48 Lockington Crescent, Dunstable, Bedfordshire, LU5 4SU or telephone (0582) 609533.

PACE Nightingale Modem with RS232 interface and ROM software. Will suit all Amstrad CPC's. Sell for £70 o.n.o. Phone Gavin on Weston (0934) 512442.

CPC6128 Colour Monitor, printer (DMP2160), 2nd disc drive, mouse, data recorder, joysticks, Multiface 2, blank discs, classic games, Stop Press, Maxam, magazines, books, techincal manuals. Sell £575. Hertfordshire, David (0707) 272415.

AMSTRAD CPC464 and Colour Monitor DD1 disk drive, Multiface 2, 35 cassette games and three disk games worth over £750 sell for £350. Telephone (0555) 70187 evenings only.

CPC6128, Colour Monitor, cassette unit, two joysticks, dust covers, manuals, etc. over £150 worth of games. Excellent condition, only £285. Telephone Stuart, evenings (0903) 813325.

CPC464 and mono monitor, disc drive, Multiface Two, joystick, software worth over £200, excellent condition, manuals included. Nearest to £280 takes the lot. Jon, day (0742) 726914 evenings (0742) 369119.

CPC464 for sale, green screen monitor, joystick, many games, excellent condition, manual included. Genuine reason to sell £150, buyer collects. Tel: (05212) 6990 between 9 and 5 o'clock.

CPC6128, colour monitor, cassette recorder, DMP2000 printer, AMX mouse, Multiface II+, over 100 games on disk. Also DTP, Business, Utility software plus A.A. 6 - 54 (Bound). Any reasonable offer. Worcester 53060.

CPC464, colour monitor and Dot Matrix printer, Mini-Office II plus other games, joystick, labels, paper, etc. All very good condition £275. Tel: (0934) 641223. Write to Chris, Flat 4, 30 Clevedon Road, Weston-Super-Mare, Avon, BS23 1DG.

AMSTRAD CPC6128 colour montior, tape deck, 200 games/utilities, 120 magazines, 2 joystics, tape/disc boxes, original computer boxes, good condition, worth over £1500 Sell £500. Tel: 01 941 4864 evenings.

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AMSTRAD PPC640 2 printer plus disks, excellent condition £650. Phone Annette Friar on (045383) 3502 after 6.30pm.

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Naked Video

Scroll on! (groan) CONRAD BESSANT gets into some heavy screen-shifting with that super-versatile CRTC chip...

Scrolling is probably the most famous video effect, and can be used just as an interesting way of clearing the screen, or more usefully to allow the screen to act as a window onto a much larger area.

Scrolling is not only of use in games, it can also be useful when displaying large amounts of data. For example, the screen could be used as a window onto a long graph of data from a sound sampler, with the user scrolling the screen from left to right to see different parts of the recording.

There are two methods of performing scrolling. One of these is by directly addressing the CRTC chip, the other is purely by software means.

As you may remember from Part 2 of this series, there is a period when the screen is not being written to. This is called frame flyback, and occurs every fiftieth of a second. If a full screen sideways scrolling routine is to work well it must be able to move the entire screen area left or right one step during frame flyback (one step can be anything from a single pixel to about 8 pixels for a good scroll). If this cannot be achieved, the scroll will not be smooth, with visible divisions appearing between different parts of the display. This means that whatever method we use it must be fast.

The Software Method

The software method basically works by shifting all the pixels in the required area up, down, left or right one pixel, and filling in the resulting gap.

If you attempted to write a routine to do this in BASIC a large number of PEEKs and POKEs would be required, and the program would run very slowly. In contrast, Z80 Assembly language is inherently faster and has a wide variety of instructions dedicated to memory operations that can be performed relatively quickly on anything from individual bits and bytes to large blocks.

The assembly language program below scrolls the whole screen left four pixels using the software method. This uses the LDIR instruction, which copies a block of bytes from one address to another. The number of bytes to copy must be held in BC, the source address in HL, and the destination address in DE. So this routine will shift all 16K (&3FFF) bytes of the screen display one byte down in memory, i.e. one byte to the left of the display.

```
LD HL,&C001
LD DE,&C000
LD BC,&3FFF
LDIR
RET
```

If you don't have access to an assembler, you can use the following BASIC program to load the above routine into memory and execute it.

```
10 FOR adr = 40000 TO 40011
20 READ n$
30 POKE adr,VAL("&"+n$)
40 NEXT adr
50 CALL 40000 'Execute the routine
60 END
70 DATA 21,01,C0,11,00,C0,01,FF,3F,ED,B0,C9
```

As you can see, this routine is no use for scrolling the whole screen. This is because even though we are using the quickest software method available it is still not quick enough to move the whole display during frame flyback. However, the software approach is able to scroll small or irregularly-shaped areas of the screen (up to about an eighth of it), which is something that the CRTC method cannot do. However, it is not particularly easy to implement small area software scrolling routines due to the complicated screen memory map of the CPC. If you are particularly interested in software scrolling then I suggest you read *Cracking The Code* in *AA55*.

The Hardware Method

This is where our friend the CRTC comes in yet again. By directly accessing this chip, multi-directional full screen scrolling can be performed smoothly and quickly, even from BASIC!

Registers 12 and 13 of the CRTC tell it where the first byte of the 16K screen memory block is in RAM. Register 12 holds the high bit of this address, while 13 holds the low bit. The normal position of the screen in RAM is &C000, but we do not send &C000 to the two registers, we actually send &3000. So the following line sets the screen RAM to its default position (&C000).

```
OUT &BC00,12:OUT &BD00,&30:OUT &BC00,13:OUT &BD00,&00
```

This is all on one line because when text

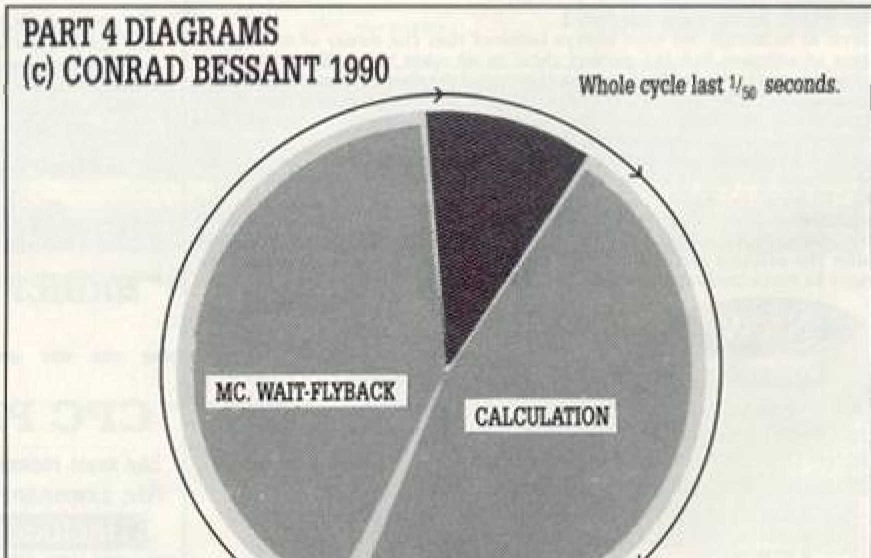


Fig 1: The display cycle in relation to the scroll demo program (not to scale)

INTERLACE AND SKEW REGISTER (R8)

This is a miscellaneous register which can be used to perform a few minor effects. It is arranged as shown below.

Data Bit:	7	6	5	4	3	2	1	0
Decimal Value:	128	64	32	16	8	4	2	1
Name:	C1	C0	D1	D0	-	-	V	S

Bits 0 and 1 are used to set the interlace mode. Interlacing is usually turned off on the CPC, as long as bit 0 is set to 0 then interlacing will be off. Turning interlacing on creates a 'shimmering effect'. The table below summarises the action of these two bits.

V	S	Raster Scan Mode Description
0	0	Interlacing off
0	1	Interface sync. mode
1	0	Interlacing off
1	1	Interlace sync. and video mode

So the following will turn interlace sync. mode on;

```
OUT &BC00,8:OUT &BD00,1
```

The other six bits are of little use in video effects, however, if both D0 and D1 are set to 1 the video output is disabled, for example the following turns the display off.

```
OUT &BC00,8 : OUT &BD00,48
```

Although you cannot see any proof the computer is still working, and if you are a good typist you can type the following to turn the display back on.

```
OUT &BC00,8 : OUT &BD00,0
```

This would be useful if you wanted to make the screen flash or prepare a screen and display it instantly, as it is much quicker and easier to do than the normal palette changing method.

To make the process smoother you could call MC_WAIT_FLYBACK immediately before the OUT commands.

goes off the bottom of the screen the operating system scrolls the display up one line using registers 12 and 13, so their contents are altered. However, they are reset to their default values every time the mode is changed.

By changing where the CRTC looks for screen data we can make the whole display appear to move. For example, reset your CPC and try sending the value 1 to register 13 like this:

```
OUT &BC00,13:OUT &BD00,1
```

This tells the CRTC to use the 16K block starting at &C001, which has the consequence of moving the whole screen left. Notice that unlike moving the screen using registers 2 and 7, this method does not affect the border.

You can see that this is almost instant, unlike the software equivalent above. By looping this incrementation of the address, a smooth scrolling routine can be constructed, like the one below:

```
10 BORDER 16
20 WHILE 1
30 FOR f=&3000 TO &33FF
40 CALL &BD19
50 msb=INT(f/256)
60 lsb=(f AND 255)
70 OUT &BC00,12
80 OUT &BD00,msb
90 OUT &BC00,13
100 OUT &BD00,lsb
110 NEXT f
120 WEND
808 STATE
```

Notice that instead of garbage from non-screen parts of memory filling up the gap left at the right hand side of the screen, the screen actually wraps around. This is not always acceptable, and in most applications the piece wrapped around would be written over by the new graphics coming onto the screen. This wrap-around area is actually the rightmost column of bytes in the screen RAM, so is a total of 200 bytes as in all modes the screen is 200 bytes high).

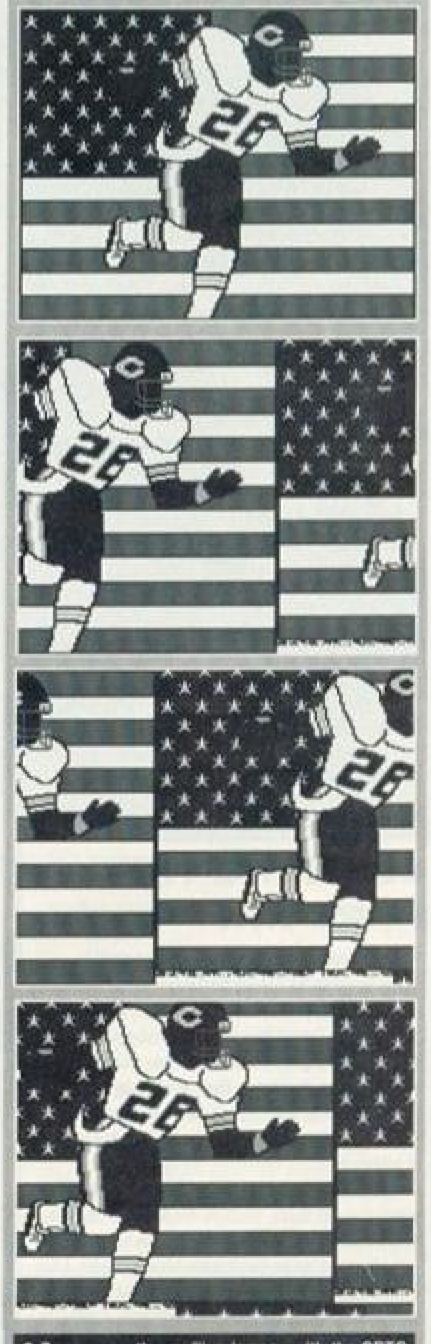
It is impossible to write a BASIC routine which could write 200 bytes to the screen during frame flyback, as BASIC is too slow, so machine code would have to be used. What you actually write to this column of bytes will depend entirely on what you are displaying and where the data to be displayed is coming from. However, you must remember to update this whole column to eradicate any remnants left over from the lefthand side of the screen.

This program uses the video programmer's most useful operating system call, MC_WAIT_FLYBACK. When called (at &BD19), it stops the computer until the next frame flyback begins. Its position in the program had to be carefully chosen so that the screen operations (i.e. the two OUT commands) occur during frame flyback to avoid unsightly side-effects. The calculation part of the loop does not affect the screen, so this can be performed at any time during the display cycle. In this program, because the two OUT calls use up most of the frame flyback time, the calculations happen while the screen is actually being written to. Figure 1 shows the display cycle for this program. If you want to see how important the MC_WAIT_FLYBACK call is, delete line 40 and RUN the program again. Not very smooth, is it!

Of course, there are problems caused by scrolling the whole screen. An important one is that all score/status areas not part of the main playing area will also be scrolled. Next time we will be looking at a way to get round this, but it's still not a perfect solution.

Before you go away and spend hours trying to write a smooth CRTC or software scrolling routine it is interesting to note that it is not always necessary to have a whole screen or whole area scrolling routine to create a scrolling effect. If you only have a few items on the screen at once it can be quicker and easier to define them all as sprites and then by moving them all in a particular direction the display appears to move in that direction.

Next time we will take a detailed look at how to create multi-mode screens using the Video Gate Array.



● Super-smooth scrolling is easy with the CRTC chip

Blockbuster!

Who wants to be programmer? More money than you know what to do with... a new Porsche every week... luxury timeshare apartment in Benidorm... ah, that'd be the life. Mind you, there is that small matter of selling a block-busting game in the first place. ADAM WARING explains...

So you want to see your name in lights, be bathed in eternal glory and obtain fame and fortune by writing computer games?

Well, there's no guarantee of any of that. It's gratifying to see your games on the shelves of W H Smiths, but it's not necessarily going to make you a household name. There are a few exceptions, of course – the Oliver Twins have achieved both fame and fortune, as has ace programmer Raf Cecco – but these guys are in the minority. The most that the rest of us can hope for is a modest surge of pride when pointing out your glossily-packaged game in the shops to your friends...

Down to Earth

A few years ago certain software houses hyped their programmers to the skies, claiming that they had Ferraris coming out of their ears and earned hundreds of thousands a year. This simply wasn't true. In reality, most programmers were over-worked and under-paid (a bit like computer journalists really) – and it's just the same today. However, a games writer can still scrape a modest living, and gain a lot of job satisfaction doing it.

Home or away?

There are several paths into the industry. Working in-house for a company provides a relatively stable working environment. You get a regular income, work with a team, and have all the work you need sorted out for you.

However, there may not be a software company near you, and it can be a big step moving away from where you live. Besides, for a rookie programmer it is not always easy to get a job in a development house – generally you need to have some experience already.

If your heart is still set on working in a programming team, the best place to look for work is the pages of our sister magazine *New Computer Express* – there's a section dedicated specifically to jobs in computing (and on top of that it's a darn good read too!).

Working from home is the other option. The freelance programmer enjoys much more freedom than the nine-to-five programmer. Many coders prefer to work anti-social hours, and in fact it's a good idea to start by coding a game in your spare time. This is because games take a long time to write, and if you want to eat then you'll need some other means of supporting yourself in the meantime.

It may be possible to strike a deal with a software house whereby they pay you whilst you're writing the software, but again they will probably only agree to this with experienced coders.

Planning ahead

So how do you start on your Mastergame that no-one will want to be without? The planning stage is very important. Many programmers ignore this vital stage with their early efforts, preferring to barge straight in designing the game as they go along – and blundering around problems as they get to them. With this method the program has no clear direction. The code starts to look like spaghetti as impromtu changes are made. It ends up taking longer to write and with ten times as many loopholes.

So – when you have decided the basic theme of your game, sit down with a pen and paper and work out a specification. Having a helpful friend to thrash out the game's plot with is a great boon, and in all likelihood will produce some excellent ideas.

Then spend the next week or so refining the specs, working out the finer details. At the

LEARNING THE HARD WAY

You will need to be reasonably competent in machine code before embarking on your first project, but you don't have to be an expert. A great deal is learnt in the process of writing your first major program. This is the way that the vast majority of coders learn their trade – by practice. There is no training course for writing games and practically everyone in the games industry is self-taught.

There must be thousands of unpublished programs out there, though, so don't be too disheartened if your first project comes to nothing – it will serve as an invaluable lesson. Even *AA*'s esteemed Technical Editor's first game came back firmly impressed with the 'Reject' stamp. (Rare limited editions of *The Ghastly Labyrinth Of Saturn* are available for only £9.95 from Waring Enterprises. Order yours today!)



end of that you'll have a sizzling game plan.

Of course, as the development of the project progresses the game may alter radically, but with your guidelines firmly in mind it won't stray too far from its original course.

It is difficult to come up with a totally original concept. Virtually everything has been done before. Simply adding a new twist to a tried and tested genre is no bad thing, though. Try nevertheless to be as original as possible. If nothing else, a game too close to the style of an established classic could be asking for trouble – you don't want to end up in court! Additionally, anyone who discovers that they've just bought a new game practically identical to one they've already go won't be too pleased.

Be specific

Suppose, then, that you've decided your masterpiece is going to be about a hedgehog that has to work his way through fairyland on the planet Zog (now there's an idea).

Work out an idea of the plot. What is the objective of the game? What puzzles or difficulties must the player overcome? Should it be a sideways-scrolling game or a platform and ladders variation?

The more questions you ask yourself about the game, the more answers you'll have when you come to writing it.

Right. You've thought up your theme, written out a sheet of specifications, and developed it into a plausible idea. What you need to do now is figure out exactly how the game is going to work.

You've got a fixed amount of memory to work with inside the plastic casing of your CPC. 64K may seem a lot, but after you've allowed a quarter of this for the video display, you soon come to realise how tight the memory can get – alloting the right amount of precious RAM to the different sections of a game is a tricky juggling act.

A game can be roughly divided into three parts, the code, the graphics and the data for the screen or level layouts. You should aim to make the machine code as compact as possible, but that depends on how efficient a programmer you are. Try not to go over 10K or you'll limit the other areas of the game too much. It's the graphics and screen data sections that are the real play-off though. Lots of large sprites and detailed backgrounds cut down on the amount you have free for the game map. On the other hand, if a large playing area is essential then you'll have to make do with fewer graphics. It's certainly worth doing a few sums at this point. Careful calculations should help you get the balance just right.

Draw out a rough map of the game's locations. You needn't fill in the whole thing at first. A few detailed screens including plans of the obstacles encountered and some indication as to the size of the game area will be enough to give an idea of the overall content. You will have already decided the format of your game at this stage, and you should by now have a very good idea about what 's involved.

These are all specific aspects of games writing to be discussed properly in a future instalment. For now, there is one more – very important – thing to consider. Are you actually capable of taking on the project?

It might be best, for example, to stick to a simple platform-type game at first, rather than a complicated multi-directional scrolling 3D effort. These things have a habit of working out ten times more complicated than you could have imagined. Be adventurous by all means, but don't bite off more than you can chew.

WHAT PRICE ORIGINALITY?

The first thing to consider is what kind of programming work you want to do. Writing conversions for your own machine of games currently running on other formats is quicker and easier than coming up with original games because you already have in front of you a detailed specification of what needs doing. However, most software houses prefer to hand over the conversion work to professional development houses.

Writing original games may be tougher, but it gives you more artistic control over the direction the program takes. It's very satisfying creating the puzzles and problems that baffle the eventual buyers of the game. Additionally, there won't be an enforced deadline on the game's completion (although that's no reason to sit back and do nothing when you feel like it!).

Writing a computer game is a lengthy process, generally taking between three and six months from start to finish. In extreme cases, a game can take over a year to complete. Alternatively, a team of particularly adept programmers could knock up a new rendition of an old theme in under a month. Generally, though, for an most programs a substantial amount of time must be set aside for development.

WHAT THE EXPERTS SAY...

Ian Andrews of Incentive is one of the game's industry's success stories. What did *he* have to say to people who wanted to become programmers? We tied him to the office swivel-chair and turned the anglepoise on...

Right, mister! If someone's thinking of getting into writing games, how do they go about it?

Well, if they've already got some experience of writing games in machine code up to commercial standard, they should approach a company with a submission of what they've done. The best way to get a job in the industry is to *show* people what you can do.

When you come to design your game, how do you go about it? What makes a good game? How do you get your ideas?

They tend to evolve. You come up with a basic concept to start with, and as the plan gets implemented and the coding starts, everyone chips in with ideas and all the good ones get put in.

Do you think it's important to have a specification before you start work, to have the game planned out?

Yes. It's important to have a basic concept, an idea, maybe the name of the game or its style, because if the initial idea is weak, or wrong, then no matter what you do afterwards you're wasting your time.

We get letters from these kids who obviously don't know the first thing about the industry or writing games or anything. But they want to be a games programmer – how do they do it? Are there any courses for games programmers?

There's no real point in 'training' because the industry isn't big enough to have any 'qualifications'. You really have to train yourself until you're really competent in your area... One way is to start by writing budget games. They're more likely to get them seen by a lot of people. One of the most impressive things to a prospective publisher or employer is if you have a game already published. I know several people who've got jobs just on the basis of just showing employers a package with their name on.

Is it actually easier to sell a budget game?

Yes, because they don't take as long to do, and it's a different market. With a full-price game, loads of money has to be invested in the marketing. A full-price company might release only one or two games a year, so it's quite a major investment.

Lots of people might want to become professional games programmers, but how many succeed?

When I joined the industry six years ago, the Spectrum was all the rage, and if you did anything half-decent you could sell a lot and become successful quite quickly. Because it was a new thing, people with any sort of talent at all found it much easier to get in. But now the market's established, and there are so many software products already available, it's much harder.

Do you think the role of the programmer has been glamourised? People like the Bitmap Brothers have developed this real lifestyle thing, haven't they?

Yes they have – but that's just the Bitmap Brothers for you.

So do you think the impression of the programmer's job is more glamorous than the reality or not? Is it just another job, basically?

It can be glamorous, yes, but it's more of a career job now than it used to be. The glamour side of it comes in with the marketing of the products. Really big hits tend to make the programmers into superstars.

Yes, there's this image of top programmers leaping into Learjets every weekend and flying off all over the world...

Well, that may be the case for some – but that's not the normal way for programmers!

So it's a living like any other?

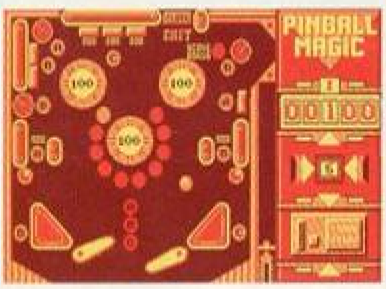
Yes. There are very few people who make huge amounts of money out of it, but it does pay well if you're very good. Ultimately, though, it simply takes an awful lot of hard work.

Trans-Europe

Roll on 1992! Here's three whole pages of some of the mouthwatering releases those lucky Europeans will be getting their sweaty mitts on over the next few months. And what about us poor blighters in the UK? Well, some of these releases may yet be making a trip across the channel...

PINBALL MAGIC

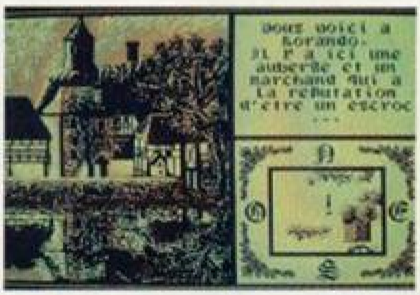
Pinball Magic from Loriciel plays like a certain deaf, dumb and blind kid who answers to the name of Tommy. With 12 different tables and a rolling credits feature, it's a toughie but a goodie. It's got all the buzzers and bells pin table fans could wish for, as well a particularly brilliant break-out style table.





IRON LORD

First previewed back in *AA41*, *Iron Lord* is by UBI Soft. A massive adventure/arcade, it will be hopping on a cross-channel ferry any day now. The story focusses upon a dishonoured son trying to recapture his title and lands. Roaming the fiefdom, you must build an army of loyal supporters, gather cash, negotiate mazes, survive assassination attempts, display your skill at archery and then top the evil Uncle! The game's so big it needs two disks, and even then there was barely room for the music!







SKWEEKY-CLEAN

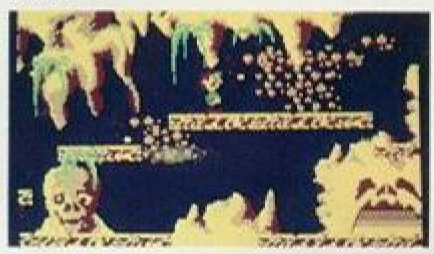
Loriciel is a company noted in England for one game – but what a game it was – *Skweek*. The fiendishly cute but devilishly hard game was a smash hit last summer, but Loriciel has been active a lot longer than that on its home ground.

It began as a coding duo that has now grown to fill two offices and roomful of programmers. It made its name with games like *Turbo Cup* (distributed by Elite in the UK) but is set to make a major move on the British market this summer under the guidance of US Gold. For a taste of the forthcoming goodies, grab a look at pages 32-33.

LORICIEL

TWINWORLD

Trying to recover a magic amulet from the evil Lord Maldur ain't easy, as you'll discover in *Twinworld*, by UBI Soft. In this platform arcade, you've the unenviable task of dodging monsters and traps in a bid to save your people from tyranny. Cute is the name of the game, which features beautiful backdrops and great tunes.



NIGHT HUNTER

Batty or what? In UBI Soft's *Night Hunter* you don't play the hero but the villain, Count Dracula, on the hunt for a midnight snack! Blending humour with a neat nightmare sensibility, you control the Count as he roams about as a bat/werewolf/human. You must find a route through his gothic castle, keeping the energy levels high by drinking people's blood!



Excess!



CRAZY SHOT

Loriciel stormed the Christmas market with its WestPhaser and is following it up with a series of Phaser-compatible games that can also be played on joystick or keys. This latest little venture sends them to the fair as you go ape shooting bottles, cans and those Heineken ducks. An ideal ground for the Lightgun, it remains to be seen whether the game itself will sell individually in the UK. If the West Phaser makes it through, you can be sure that *Crazy Shot* won't be far behind.





WESTPHASER

This is a game written especially for use with Loriciel's West Phaser Lightgun. This was in fact one of *three* Lightguns doing the rounds last Christmas: The West Phaser, Virgin's Magnum and Spanish 'Gunstick'. Loriciel designed its blaster with a real gun look and a hammer action. The company worked the Western look – it resembles a Colt '45 Peacemaker – in with the game and you can go from shooting it out with gunslingers in a saloon, to mineshaft battles where you have to be careful not hit the dynamite.

One rather unique feature of the system is that it gives you the ability to design your own games using the Phaser! It's still being decided whether the WestPhaser will be introduced over here, but *AA* has one in its possession and it's brilliant. The gun's accurate, the sound's good (a real nice shot effect) and the software, while simple in concept, is complex in design. Let's hope that the powers that be see fit to let them flood in!



VIRGIN TERRITORY

Virgin Loisirs (Virgin France to us Brits) was understandably crowing over its recent coup. It's captured the programming team behind *Purple Saturn Day*, and now has them working on its new Cryo Label.

As well as employing people who know one end of a keyboard from another, the label seeks to create 'new age' computer games. These are games that are at once both challenging and fun, blending technology with the visions of the future. If they can help to re-capture some of the magic that was *Purple Saturn Day*, then they'll be onto a winner.

This is not to say that the company hasn't been busy, recently it scooped the awards at the *Amstrad Cent Pour Cent* bash for its *Double Dragon* conversion. It's also had its hands full with minor details like looking after Lightgun sales, the Sega licence and the new Megastore to contend with. All in all Virgin is set to be a major force in the French market over the next few years.

SPIELEN SIE DEUTSCH, POR FAVOR?

TURRICAN

The Germans, deprived of the CPC at home, recognise the export potential for the format. Rainbow Arts, which bought us this month's spiffing *X-Out*, has a new project up its sleeve. The game *Turrican* was designed and initiated in Germany, and has been sent to England for the final stages of conversion. A multi-platform, multi-level, high-explosive romp, it has the all the makings of something special.



AMC

France isn't the only place where CPC software is the biz. In Spain, Dinamic has been churning out class software for years - *Army Moves, Navy Moves, Game Over, After The War* etc. Here are some snaps of the company's latest project, *AMC*.





Looking good

Some of the other delights in store for the French (and us too, with any luck) aren't finished yet on the CPC but have been made ready on other formats. Here are some shots to get those joystick fingers waggling in anticipation...

BLOOD LUST

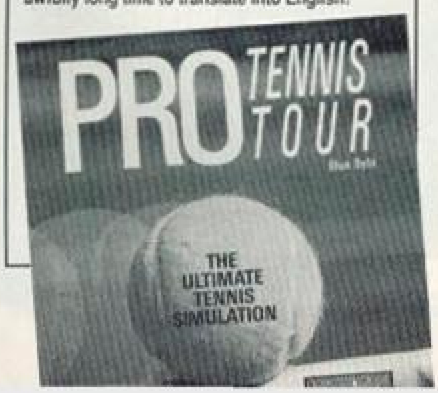
Captain Blood has to be the most famous 'French' game ever and it was bought to us by Infogrames. This team has consistently churned out games that dazzled, amazed and confused us, such as *Purple Saturn Day* and *Tin Tin on the Moon*. Infogrames' games are often noted more for their quality of coding than gameplay, *Action Service* being a prime example. The company has been quiet recently, but is planning to release *Teenage Queen* this summer. Interesting, if not wholly tasteful!

INFOGRAMES

SOFT AT HEART

UBI Soft is one of the really big companies in France. It's split between distribution and software production. On the fun side it is really only known for last year's ace *Pro Tennis Tour* (a deserving Rave winner if ever there was one) and which went on to sell almost 100,000 copies internationally.

UBI Soft was able to grow thanks to the success of one CPC game, *Fer Et Flamme*, way back in 1986, which in its lifetime sold over 20,000 copies in France. The company is now stepping up its operation internationally and is focusing on the UK as a major market. *Amstrad Cent Pour Cent* loved two of its games to death – *Iron Lord* and *Defender of the Crown* – categorising them as 'typical' French games. The trouble is, being incredibly deep arcade adventures (*Iron Lord* needs two disks!) they take an awfully long time to translate into English!



JUST CRAZY ABOUT CARS

Mention the name Titus, and most people will think of the company's famous racing games *Crazy Cars I* and *II*. Both were mould-breaking and have become synonymous with French programming innovation. *Crazy Cars II* stunned the world with its overscan screen, a technique which allowed Titus to use every single pixel on the monitor.

Starting in 1985, the two brothers Herve and Eric Caen have built themselves an empire (no pun intended) that is founded on long, hard coding. The company isn't afraid to spend money in order to make money, though not on the regular licences. It's invested primarily in CPC programming technology – and just look at the results!

Eric, the programming specialist, explains: "For the last three years we've been using a processing emulator. It's a CPC without its Z80, opened up and linked to Z80 emulator. This makes it a much more powerful machine, and much more flexible. We can develop on it for any Z80-based machine, be it CPC, Spectrum or Sega." Using such techniques allows them to get more out of the machine than was previously thought possible.

Fire and Forget II

Trying to establish label identity in the UK Titus has opted for a number of sequels. The first of these is *Fire and Forget II*. Number one was a very fast and ultra-furious driving game/blast-em-up, and its relation looks like being even better. We've got screen shots of the Amiga version, because it's furthest ahead on the programming schedule, but if those Caen coders are up to par it's exactly the way the CPC will look too!

There's also the jailbreaking *Dark Century*, which is expected any day now. So get ready for some crimebusting, tank-style!



1 *Mystical*, Cryo (Virgin France): A vertically-scrolling cartoon caper, it's by the same guys who brought us *Purple Saturn Day*.

2 *Extase* – working title only – also by Cryo: A development of the brilliant *Brain Bowler* game in PSD. It looks to have that elusive simplicity that makes a game so playable.

3 Tennis Cup, Loriciel: A tennis game that features split-screen action to allow real two player games. It should hopefully be here in time for Wimbledon.

4 *Super Skweek*, Loriciel: The thing with the paintbrush is back, and this time he's bought his girlfriend! *Skweek* returns with even more features, including two player mode!

5 *Harricana*, Loriciel: based on the famous (*could've fooled me – ed*) snowmobile cross-country race in Canada. Why is Loriciel covering it? Its boss man's taking part...!



1



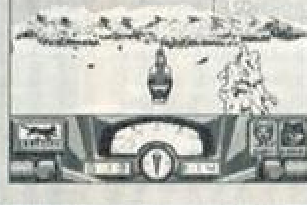
2



3



4



5

These screen shots vary in format, but they will appering on the CPC shortly.

C'est plein pour moi!

Amstrad Cent Pour Cent could claim to be the world's leading CPC title (after AA of course!), with a regular circulation of some 50,000. The last on the CPC scene in France, it took this vast market by storm. The reasons for this success? Well, it's obvious really...



Amstrad Cent pour Cent was launched as a new concept in the French computer magazine scene. Previous titles had either been little more than dry 'techie' manuals or glossy games catalogues that raved about any game on a 3-inch disk, regardless of its quality. Amstrad itself was looking for a more positive platform for the machine, and snapped up the proposed format of *Amstrad CPC* as representing the ideal 'official' Amstrad magazine.

Amstrad CPC built a team of CPC enthusiasts – an essential foundation – but sought to do more than just write reviews, show pretty pictures and run the occasional competition. The mag was an entire concept, working on the premise that CPCs were one of the central parts of a French youth culture that also embraced comic books, music, movies – and even sex.



The way they saw to fulfil the demands of computer users centred on the construction of a number of writing personas that were not only informative but also fun. The most striking is the mail-opening Miss X. A blonde bombshell, she added glamour to the magazine as well as a nice pair of legs (*yes, that'll do – ed*). Next was Sined the Barbarian, who specialised in those games where mega-death counts. Throw in the techie Logostein, a sims expert, tie the package together with a strict editorial policy that work had to be fun, and you had the answer. *Amstrad Cent Pour Cent* was to be window into a fantasy world which its readers could feel part of.

Each month the front cover is given to an artist, who has free rein to design anything they like as long as two criteria are met. Firstly, the cover must be exciting. Secondly, it must never feature a computer! The art theme from the front cover is carried over onto the contents pages (and if time permits, beyond) to give the magazine continuity.

The idea of a computer-based lifestyle magazine is further strengthened by the regular inclusion of music reviews, movie reports and comic strips – these have a more respectable reputation in France than in the UK. The readers are encouraged to share the fantasy world created for them, with more than one falling madly in love with the nymph-like Miss X.

The magazine may be humorous, but it's no joke. While mainly dedicated to the games side of the industry, serious users are not ignored – just encouraged to smile occasionally.

The company's commitment to the CPC very much mirrors that of *AA* and Future Publishing, growing from a small band of committed gamesplayers and technicians into a polished and professional publishing house. There is, of course, one big difference – *Amstrad CPC*'s official Amstrad link.

Amstrad CPC has resisted the progression towards the 'lapdog' status of so many official magazines, though. All it surrendered to Amstrad was a few ad pages – a worthwhile sacrifice for editorial independence.

After all this hard work, *Amstrad CPC* has



● The Cent Pour Cent team

the honour of being the leading single-format magazine in the France. It gives it the casting vote on what's is good, bad or ugly on the software scene. Indeed, it's the magazine that the software houses look to for recognition of excellence. Every issue it gives its equivalent of a Mastergame, a '100% D'Or'.



And at the end of the year it holds its own annual awards ceremony.

As the CPC gets to grips with the concept of another new machine swelling its ranks and user base, the future for *Cent Pour Cent* looks bright.

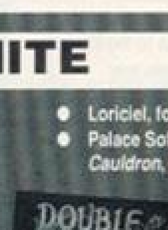
100%'S DYNAMITE

Amstrad Cent pour Cent magazine holds annual awards for the year's best software – and they carry as much weight as the Oscars over there!. The following are *CPC*'s awards for '89:

- Best arcade action: *Double Dragon* (well, no-one's perfect!)
- Best Arcade Adventure: *Barbarian II.*
- Best Adventure: *Iron Lord.*
- Best Arcade conversion: *Double Dragon* (!)
- Best film licence: *Robocop*
- Best Simulation: *Airborne Ranger*
- Best Sports Simulation: *Skateball*
- Best Reality/Strategy: *Defender of the Crown*

Special awards:

- Innovative Programming: Titus, for it's overscan techniques.
- Loriciel, for variety and quality of product.
- Palace Software, Games of the Decade for *Cauldron, Sorcery, Barbarian I* and *II.*





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NEC P2200	2844	C
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Panasonic KX-P1180	2904	C
Seikosha GP100	2317	B
Seikosha SL80	2741	C
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Happy Birthday Maxam

It is the 5th anniversary of the release of Maxam, the first ROM based program for the CPC.
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Free for all!

Fed up with boring old BASIC? Want to know how you can sample the delights of other languages without having to spend lorryloads of loot on expensive packages? JERRY GLENWRIGHT knows exactly where to go...

In the beginning there were hackers. Not the guys who ripped off Prince Phillip's electronic mail box on Prestel, but computer wizards – men and women to whom the computer keyboard was a gateway to the soul of the machine. These guys didn't mess around; they were proficient in any one of a dozen complicated programming languages and could make the computer jump through hoops in Pascal, COBOL, C, Forth or assembler.

With the advent of the 16-bit machines, programming became the domain of the professional. Who had the time or energy to invest many hours learning extremely difficult 16-bit programming involving arcane operating systems such as GEM? Computer owners stuck to games and off-the-shelf packages, and amateur computer programming was left to computer science students.

But what's at the heart of your beloved CPC? The familiar Z80 8-bit CPU. No fancy operating system, memory management units and the like, but a clear way into uncomplicated programming for all. Perhaps it's time for a re-appraisal of some of the languages not seen for some time outside the college campus.

Blaise about Pascal?

Pascal was devised as a structured programming teaching aid for higher education students by Niklaus Wirth in 1968. Blaise Pascal was a famous 17th century philosopher responsible for the concept of the digital calculating machine, whose name was given to the new language.

Unlike the cumbersome COBOL and fiddly Fortran, Pascal was a perfect introduction to proper programming techniques. Procedures, functions, global and local variables and constants make Pascal the most lucid of all computer languages. It's powerful, simple to learn and a sound basis for learning other languages.

JRT Pascal is a CP/M-based public domain version of this popular language for the Amstrad CPC. Booting is a simple matter of running the file JRTPAS3.COM from within the CP/M environment. You can use either CP/M 2.2 or Plus, but you'll need to get all of *JRT*'s support files onto a system formatted disk if you're running the compiler from CP/M 2.2.

Unlike many public domain programs, *JRT Pascal* comes complete with an extensive user manual containing all the information you're ever likely to need when writing and compiling Pascal. The manual is held as a dozen electronic files on the same disk as JRT, so you can read it on screen or send it to your printer.

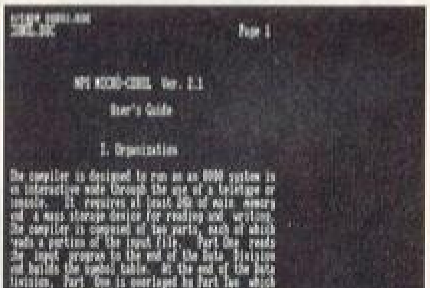
If you've previously only programmed in BASIC, then Pascal is gonna be a real eye-opener. You can break up problems into manageable chunks, just like everyday life, assigning small blocks of code which can be linked together to bulldoze problems into oblivion!

Probably the two most prized features of Pascal are procedures and functions. Roughly analogous to BASIC's subroutine, they enable programmers to define variables whose values are only valid within that particular piece of code. A variable with the same name somewhere else in the program can have a totally different and separate value. These local variables pave the way for Pascal to make use of recursion – one function or procedure continually calling itself in order to solve a problem – by enabling the language to keep proper track of itself. BASIC's global variables mean that the language cannot use recursive techniques. Recursion is powerful and greatly speeds up a program. And because you can define autonomous procedures and functions, they can be saved and used over and over again.

JRT Pascal is an almost standard ISO (International Standards Organisation) implementation of the language, which means that the code you write at home using your CPC will be portable. You can run the same program at home or on the mainframe at college or work. Compilation is fast (especially if you load the compiler and support files into a RAM disk on machines with more than 64K), and the resultant machine code is between five and ten times faster than interpreted BASIC. A significant improvement in speed and ease of programming. *JRT Pascal* – on a PD disk near you.

Mountains of code

The Common Business Orientated Language – or COBOL to you and me – probably accounts for more code running on more machines than any other computer language in the world. A small planet's worth of COBOL programs process financial transactions the world over. Next time you get a statement from the bank, it was almost certainly generated by a COBOL program.



● Want to program in COBOL? This version's fully documented, and available from WACCI PD library.

MANUAL LABOUR

OK. You've read all about Pascal, COBOL and the like, and you're keen to try them out. What's that? You've never even seen a COBOL program, let alone programmed in the language? Sure, both PD Pascal and COBOL come with electronic documentation on their respective disks, but they detail the operation of that implementation – they're not there as tutorials. What you need is the good old textbook. Don't be put off, they've come a long way since your school daze, and can actually be fun.

● For a definitive introduction to Pascal, you need *A Student's Guide to Programming in Pascal* (ISBN 0 471 10402 7) by L A Atkinson and published by Wiley. This is an excellent introduction to all things Pascal and its information is easy for the beginner to assimilate. Priced around £10 and available from all good High Street book stores.

● COBOL is a very simple language to get to grips with,but you'll need some king of introduction all the same. *COBOL For Students* (ISBNO 7131 3477 1), by Andrew Parkin, is lucid and actually fun to read. Published by Edward Arnold, it's priced at £6.95.

● *Structured Basic and Beyond* (ISBN 0 914894 16 1) is a good introduction to applying structured programming techniques to good old BASIC. Wayne Amesbury is the author, and Computer Science Press the publisher. Expect to pay less than a tenner.

COBOL was the first successful language for applications outside the military. Before the advent of COBOL, programmers struggled to devise ways of calculating, tabulating and reporting money movements using languages originally constructed to control missile launches and the like! In April 1959, three committees were formed to determine the shortcomings of existing languages, and to design and implement a new common business language to solve the problems associated with the burgeoning post-war economies. *Common* business language? Remember, these were the days when a UK government 'think-tank' decided that just one centralised computer would be enough to satisfy the processing needs of the entire country! Eventually, COBOL came into existence. It was new, powerful and universally adopted by financial institutions and programmers everywhere.



● David Wild's been at it again! This time with an extended BASIC.

Programming small home micros with COBOL is not an especially viable proposition, though. The language is cumbersome, and requires truly horrific amounts of RAM just to run. It's wasteful of resources and time alike, but it's still the most popular programming language in the world. If you have the faintest interest in computers and programming, isn't it about time you got into COBOL? Public domain COBOL, incidentally, is a slightly cut-down implementation of the language you'll find in banks, building societies and universities.

Programming in COBOL is like no other programming exercise. COBOL relies on English-like statements such as 'File control', 'Select data-file', 'Assign to disk', 'Organisation is sequential' and so on (now you see why COBOL uses so much space...), and consequently is very easy to learn. The compiler is slow and the code generated even slower, but it's fun to program in the footsteps of so many programming pioneers before you, and it's very useful if you're currently studying a computer science/studies course at college. You'll be able to program at college, then bring your code home and run it on your CPC. After editing and recompiling, it can be re-run at college.

COBOL is available from WACCI PD library, the address of which appears in the *Where To Go* box.

Back to BASICs

Once shunned by all but the most computer-illiterate of novices, BASIC is making a comeback, due to several new implementations featuring the kind of functions normally associated with more powerful languages such as Pascal and C. *CPC BASIC* is fairly good as small micro BASICs go, but wouldn't you like to have powerful drawing, file handling and extended disk commands available from the language you know and love?

David Wild's *BASIC+* gives you just that. Dozens of new commands that take CPC standard BASIC to the very limits. Double location peeking and poking with just one command, box drawing by issuing the Box command with co-ordinates, disk reading and writing commands, extended string variables and much, much more. *BASIC+* run under *CPC BASIC* itself, and patches the latter language with the code for the new functions. It's robust, doesn't crash easily like so many other BASIC patches I've tried and is simple to access and use. There's even an on-line help facility that provides a summary list of the new commands at your disposal, each with any expected assignments. *BASIC+* is available from DW Software.

Programming is all very well, but unless you have a good range of programming utilities at your disposal whilst writing programs, the whole exercise can be very tiresome. One slip, and you've deleted the wrong file – and there's no way you can retrieve files once they've been junked from the disk – is there?

Programmer's aids

Oops, from DW Software, is a little utility which enables you to resuscitate files previously assigned to the trash. You know the kind of thing. "It'll never happen to me", you say glibly, as you absent mindedly throw away the source code to the definitive word processing package you've been working on for months. But with *Oops* installed, your worries are at an end. Simply run the program from the GEM-ike desktop (featured in *Free For All* issue 54), tell it which file you've deleted, and Bob's your Aunt's live-in lover – the file is back on the desktop as good as new!

But then perhaps the real solution to the problem of deleting the wrong files is to have an 'intelligent' erase function – DW Software to the rescue once more. The disk which houses the *Oops* utility also stores a little snippet of code called *Erase*, which enables you to selectively delete one or a range of files, simply by prompting you for their names. Now there's no excuse for binning the wrong program or data.

DOING THE BAUD WALK

Public domain software is cheap, right? For the price of a disk and copying you can have access to some excellent applications, utilities, games and languages. But there is a way to bypass even the miniscule copying and disk charges and save even more cash to spend on peripherals for your groovy CPC. How? Bulletin boards. These are the electronic equivalent of the standard pin board you use to exchange notices and information at school, college and work. If you have a modem (the black box of bits necessary for access to these boards) and a telephone line, then you have the means to get your PD software – and the *Amstrad Action Type-ins*, for that matter – entirely, utterly, completely free, gratis and for nothing (well, almost! You *do* pay for the phone call).

Many of the current PD libraries springing up around the UK started their collections by downloading – i.e. transferring across the telephone lines – electronic skipfuls of public domain software.

Remember, it's all free but for the 'phone call charge – and that can be next to nothing if you're wise and restrict your adventures on the airwaves to evenings only. Cast an eye over our *Where to Go* box for some useful telephone numbers.

WHERE TO GO

• WACCI UK, 9 South Close, Twickenham TW2 5JE. Telephone 01 898 1090. As well as being a public domain library, WACCI is a fanzine of truly singular quality. Bung a couple of quid to 9 South Close and you'll receive a smaple issue with the PD lists contained therein. But do it today, becuase the WACCI library is a CPC-specific library second to none in the UK.

• DW Software, 62 Lascelles Avenue, Withernsea, North Humberside HU19 2EB. DW is the source of the marvellous WIMP environment desktop reviewed last month, as well as an gargantuan grab bag of other quality programs. Six clams will get you a PD disk positively bulging with superior software.

• Got a cassette-based system, and feeling left out of the fun? Tough! No, no, don't shuffle away sulking. Send a blank cassette and 40 new pennies to Robot PD library – the only cassette-based public domain library in the known Universe – and you'll receive a tape jammed packed with goodies. If you're one of those retiring careful types who consider the idea of sending off *40p!* to an unknown address absolutely outrageous, you can send for a free catalogue by contacting the above address (at least include a stamped addressed envelope, huh?).

• The CP/M User Group, 72 Mill Lane, Hawley, Dartford DA2 7RZ. The best CP/M user group in the UK and they have lots and lots of quality PD. Bung them a few quid for a copy of the latest newsletter.

• TUG II 0905 775191 V21/22/22bis/23 8N1. A bulletin board with a lively CPC section and a large amount of downloadable code. The board operates for 23 hours a day (what's this guy doing for the other hour?), so you should be able to make contact.

HELPLINE

Feeling helpful? Just send your name, address, phone number (say if you don't want it printed) and subjects on which you're offering help to: *Helpline*, Amstrad Action, Beauford Court, 30 Monmouth Street, Bath, Avon BA1 2AP. Please write on a postcard or the back of a stuck down envelope and keep it short or you won't get in (or you'll get cut to 'loadsagames').

If you want help contact the appropriate Helpliner - not us. By post include a self-addressed, stamped envelope for the reply - or you won't get one. And phone only in decent hours!

Piracy is not welcome: don't try it, you'll get booted off. Keep it legal. And if you receive SAE's, for heaven's sake return them with some acknowledgement. Finally, if you want to come off *Helpline* just write in and say so.

Help needed on *Treasure Island Dizzy*, and pokes wanted for *Operation Thunderbolt*.
Richard Dziegel, 89 Langdale Road, Mereside, Blackpool, FX4 4TY.

Help wanted on *Knightmare*. Any hints or tips?
Kevin John Williams, 10 Trem Y Mor, Rhosneigr, Anglesey, Gwynnedd, LL64 5QR.

Penpals wanted for Psion Organiser II programmers (with CPC) for swapping tips, programs, ideas etc. Please include SAE.
Sam Walker, 3 Tetbury Street, Minchampton, Glos, GL6 9JG.

Free help! 5,000 plus cheats, tips, maps, type-ins etc. All letters answered. Send SAE and list (please keep them short). If I can help, I will.
John Baker, 8 Alton Road, Selly Oak, Birmingham, B29 7DU.

Scapeghost, Avon, Bard's Tale - beginners help now available. Helpline club, tested listings and pokes. Also flowcharts.
Angela Allum, 22 Point Royal, Bracknell, Berks, RG12 4HH.

Penpals wanted for games and swaps. I have over 160 games, I'm 11 and own a CPC 664, Multiface II and a tape deck.
Duncan Ward, 129 Eastwood Road, Boston, Lincs, PE21 0PW.

I will write the program you need! Just send me an SAE with details of the program you want.
Keith Grimsditch, 12 Reddish Vale Road, Reddish, Stockport, SK5 7HE.

Penpal wanted aged 16 plus. Male or female, to swap games and have a good time! 464 only. You'll be sure of a reply.
Wayne "Ferret" Owen, 32 Sycamore Crescent, Sandiacre, Nottingham, NG10 5EX. ☎ 0602 398180.

Any pokes for *Robocop* on tape out there?
S Lewins, Glebe Avenue, Eastington Coll, Peterlee, County Durham, SR8 3HN.

Penpal wanted for 6128 disk (!) to swap games, pokes etc. Age 10 - 13 male or female.
David Beecroft, 57 Beeches Road, Sutton, Surrey, SM3 9NA.

Has anyone got a copy of *AA*39 or the players guide to the *Gnome Ranger* part 1 from it? Good price paid.
Sue Aubrey, 439 Coventry Road, Hinkley, Leics, LE10 0NF.

Stuck on *Dizzy* 1, 2 and 3? I can help! Send me an SAE and letter explaining which part you are stuck on, or what to drop where. Does anyone have the map (or photocopy) of *Dan Dare* from *AA* 14 and willing to swap in exchange for help?
David Henderson, Sunnybank, Sherwood Vale, Scunthorpe, South Humberside, DN15 7EB. ☎ 0724 842191.

13/14/15 year old penpal needed. Got contact with other 464 users. Needs to be in London area.
Iain Chanter (14), 1 Sanctuary Court, 65 Croydon road, Penge, London, SE20 7TE.

Help! Has anyone got *Freddy Hardest* (tape) and issues 1 and 14 of *AA*? Reasonable price paid.
David Wallis, 20 Clifford Avenue, East Sheen, London, SW14 7BS.

Cheat DESPERATELY wanted for *Football Director*, sensible price paid. I also have cheats for hundreds of games, including: *Blasteroids, Speedzone, Storm, Sorcery, Netherworld, Afterburner, Savage* etc.
Ross, 109 Crawfordsburn, Bangor, Co. Down, Northern Ireland, BT19 1BJ.

Penpals wanted from 11-15, preferably female (but don't really mind), send SAE.
Mike Khan, 21 The Leam, Daventry, Northants, NN11 4QP.

I can help! I have all AAs (except AA2 - will pay good price) and will supply any pokes, maps, hints, tips etc, for small copying fee per game. Also listings from *AA*, some *ACU* and *CTWA*. Listings to disk or printout. Also have lots of Multiface pokes and can give help with the Insider. Send SAE for details.
Mark Riley, 2 Primrose Way, Kirby Mucloe, Leicester, LE9 9AX.

Help with: Multiface 2, FD1, DMP 2000, DK'Tronics Speech ROM, Superior Software's *Speech!*, *Tasword*, *CPM+*, *Advanced Art Studio*, *Cherry Paint*, *Discovery*, *Animator* (send SAE + disk for PD demo), Basic, customising computers, making joysticks, tape load problems, disk load problems. Listings and screens printed free!
David Carter, 28 Mount Hermon Road, Woking Surrey, GU22 7UH. ☎ 0483 763223.

Poke wanted for *Karnov, Robocop* and *Booty*. Loads of pokes from Mags 1985 - 1990 eg: *CWTA, Amtix, ACU* and *AA*.
JM Pearson, 7 Muschamp Tre, Warsop, Mansfield, Notts, MG20 0ML.

Student urgently requires a disk based copy of PASCAL for use on a university course. Help on BASIC and using *Protext* with *Prospell* and *Qualitas, Advanced Art Studio*. Disk Files unerased!
Robin Brown, 13 Forbes Place, Smithton, Inverness, IV1 2NN. ☎ 0463 791641.

Please can somebody help me with the bells in *Hunchback*. I can only get on the first 2!
Lyn (7), 16 Sycamore Crescent, Maidstone, Kent.

Anyone with *GAC* for sale? Penpals wanted I'm a 464 owner. Some pokes *Bard's Tale, Chase HQ, After the War, Space Harrier. AA* issues 43 - 55.
Philip Haddigon, 49 Main Street, Fairlie, Ayrshire, Scotland, KY1 1RY.

Help given on: *Chase HQ, Kick Off, Footballer of the Year 2, Wild Streets, Shuffle Pack Cafe, Beverly Hills Cop, Great Courts, AAArgh!* and *Livingstone II*.
Help wanted on: *Tom and Jerry, Altered Beast*. Penpals wanted to swap games on disk. *AA*20 - 55, *CWTA, ACU* for sale. Send SAE.
Yong Pang, 12 Rheingold Way, Wallington, Surrey, SM6 9NA.

Wanted any pokes, hints, tips, cheats, maps etc, for any games.
Vincent Wadding, The Post Office, Long Stratton, Norwich, Norfolk, NR15 2AH.

Penpals Wanted. 16 year old boy with loadsagames and loadsamaps for sale. I have a 6128 along with other computers. Also 101% tape-disc. Send for full details, no SAE required.
Simon Pearce, Chapel Rise, High Street, Swineshead, Boston, Lincs, PE20 3LH.

I am offering CPC 464 games.
Belinda Everett, 5 Darnley Street, Old Trafford, Manchester, M16 9WD.

Wanted public domain software for CPC cassette. Send tape with software on, with a return SAE and we will return some PD software on your tape. We are particularly looking for some utilities (eg Word Processors, databases, spreadsheets, spell checker, assemblers etc). All software accepted.
Alan Scully, 119 Laurel Drive, Greenhill, East Killbride, Glasgow. G75 9JG.

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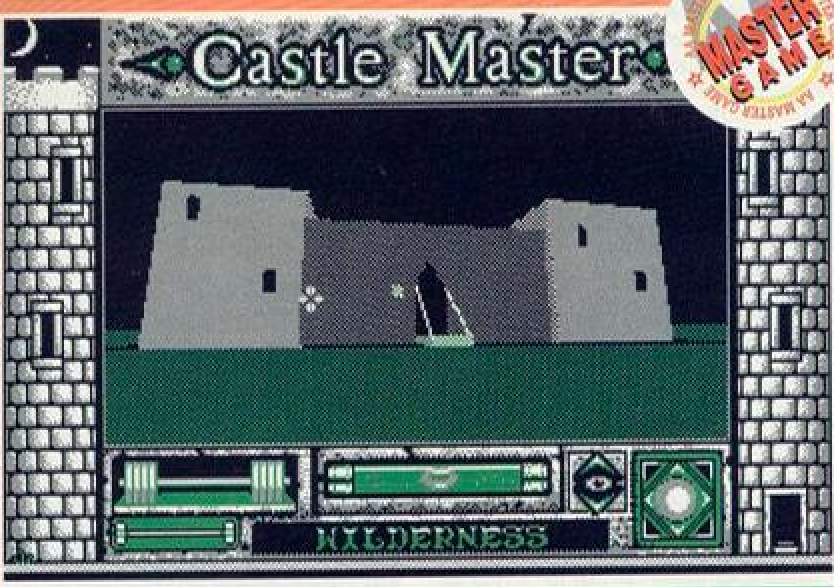
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ACTION TEST

What a corking month! *Castle Master*, *Doctor Doom* and *X-Out* all in one go!

"Freescape strikes again!"

Join the desperate hunt to save your twin from the evil Magister in Castle Master. Fight ghosts, explore catacombs and find you sister before sun up in Incentives cheese eating spectacular on page 46.



● The gates are open to a whole new world of 3D adventuring. Dare you take the challenge to try and become the *Castle Master*?



● Find the traps and solve the riddles...



● ...but watch out for ghosts!

Also reviewed

Laser Squad Expansion Kit p52
American Turbo King (lightgun) p53
Billy The Kid (lightgun) p53
F-16 Fighting Falcon (lightgun) p53
Enterprise p54
Raster Runner p54
Maze Mania p55
Hopping Mad p55
Psycho Hopper p59



● Rainbow Arts' undersea shoot-out *X-Out* is finally here. Is it a big fish or a minnow? See page 50 for the net result.



● Kung Fu capers with the Sumo crowd in Firebird's *Oriental Games*. Does *AA* give or get a kicking? Leap to page 60 to see the bruises.



● Puffy's Saga rolls onto page 59. Another cutesy spectacular or just a load of ball, as UBI Soft makes the 'Brit' connection?



● Spiderman and Captain America star in Empire's *Dr Doom's Revenge*. AA pulls its underwear over its trousers and flies in on page 44.



● Spiderman lets off a web at Machete.



● Comic book pages carry the plot along.



● Cap gets beaten and New York goes nuclear!



● Batroc 'ze leeper' puts the boot in.



● Cap gets ready to throw his shield at Zaran.

DR DOOM'S REVENGE

Empire ● £9.99 cass, £14.99 disk joystick/keys



Latveria is an Eastern European nation ruled by the iron fist of one man, Dr Doom. A twisted scientific and criminal genius, he's stolen the ultimate weapon, a C4V.G. thermonuclear missile. Let the world beware of *Dr Doom's Revenge*!

Two men stand in his way – two of the greatest heroes ever to walk the earth – Captain America and the Incredible Spiderman. Never before in the lore of comics have so few tried to stop the evil of so many in the face of such outrageous odds. You see to ensure his plot succeeds, Doom has enlisted the cream of supervillany – Rhino, Machete, Oddball the Grey Gargoyle and friends. The stage is set for an epic struggle, with the very fate of the world hanging in the balance.

Cap and Spidey have followed the trail of the stolen missile to Doom's fortress and must break in to destroy it. Each room of the castle is occupied by a different foe – a villain or a robot – who must be encouraged into submission by a shield in the face or web to the body.

Comic book pages flash on the screen as the story unfolds, with CA being the first to do battle. His route takes him up against Doom's security droids first, little more than target practice for the shield and fists. It's a straight head to head and you can find out how good superheroes really are. Captain America's – and Spidey's for that matter – moves vary according to the distance from the guy they want to stave in. The three different distances multiplying your options for knocking-out these foolish fellows. Each move, at each range, has its uses against a very particular villain.

Rhino is the first 'famous' victim. This radioactive 'dump truck' is dangerous, and can blow you out in a matter of a few hits, but he's also slow and real stupid. A few smart acrobatic tumbles soon has the incredible bulk facing the wrong way and begging for a shield in the mush. Deck him, and the comic pages hit the screen once more, this time detailing Spiderman's fate.



● Spiderman hides on the ceiling.

AA RAVE! AA RAVE! AA RAVE! AA RAVE! RAVE!

Your friendly neighbourhood wall-crawler also warms up on a robot, but his task is made easier with his web shooters and the ability to hide on the ceiling! Even the 'bots atomic pile-driver can't harm him there, and it's just a matter of biding your time, then dropping and bopping. The next man on the hit list for old 'web-features' is Machete, a terrorist turned mercenary, who has a disturbing fondness for razor-sharp swords.

Machete is a real sucker for the webs, but Spiderman only has a limited number of shots for the whole game. So the battles involving 'web-head' have an extra dimension, where you must try to balance web economy against staying alive, all while beating the other guy to a pulp. Tense is too small a word for it.

Once Machete is KO'ed then more comic pages flick up and Cap is back in action. He's had a breather and is a little healthier than before, but needs all the help he can get for his next foe Zaran. A dart-throwing nutter, Zaran is much more mobile than Rhino and when not trying to pin CA down with missiles, he tries to punch his star-spangled lights out.

The rest of the Doom crew are an even more impressive bunch: Batroc, Boomerang, Dr Doom, Electro, Grey Gargoyle, Hobgoblin, Eduardo Lobo, Oddball and Rattan. All with a special skill and a deep dislike of anyone who rights wrongs for a living.

The game relies for its initial impact on the graphic quality of the two stars of this fight night. Both Spiderman and Captain America are true to their Marvel roots. The sprites are brilliantly drawn and move the way only men who wear tights for a living could. Cap twists into realistically unnatural





● Spiderman joins the action.



● CA KOs Rhino.

positions when fighting and throwing his shield, while your friendly neighbourhood web-spinner hangs on the ceiling looking desperately from side to side in a thoroughly authentic manner.

The rest of the supporting cast, villains and backgrounds alike, are colourful, and move well and fast, if not always smoothly. They even go some way to letting the audio department off the hook for the pitiful sound effects.

All combat games need close in-fighting action to succeed, and *Dr Doom* is real edge-of-the-keyboard stuff. The flexibility of the fighting moves and the variety available all help the game live up to the expectations you have of real superheroes.

Three levels of difficulty take you from a tough game to one which is nearly impossible. You have to rely on instinct every time a new room is reached and a new villain faced – a villain whose abilities and weapons are unknown. It may look simple being a superhero, relying on special powers to see you through, but remember, the guys you have to beat up on have superpowers too, and don't relish the prospect of imminent concussion.

Paragon Software has done a superb job in bringing two classic characters to life. They move and fight exactly as their artists first intended.

The game essentially appears to be little more than a *Street Fighter* clone, with repeated battles on different screens against various opponents. However, the whole project is bound up with the superhero magic that's embodied by Marvel. If you've ever even just flicked through a Spiderman comic than this game will get its hooks into you real quick. First you want to play out being CA or the 'wall-crawler', then you feel the irrepressible need to teach those villains a heavy lesson. But be warned – it ain't easy being a caper. Nuff' said.

TW

SECOND OPINION

"Just another beat-em-up with the added attraction of the Marvel cartoon characters. If you're a fan of the comics then you may go for this, but as far as I'm concerned it had little to offer." **AW**

GREEN SCREEN

Blue on blue means occasional eye-strain.



FIRST DAY TARGET SCORE

Beat Zaran

The Verdict

GRAPHICS 93%
- ☐ Real superhero stars.
- ☐ An arsenal of fighting moves.

SONICS 01%
- ■ Oh, so that's a sound effect!

GRAB FACTOR 67%
- ☐ An instant hit for comic fans.
- ■ A curiosity for others.

STAYING POWER 81%
- ☐ A rogues' gallery of foes.
- ☐ Very tough to beat on the easy level.

AA RATING 80%
- ☐ A comic classic.



Captain America: Steve Rogers, once an everday GI, was transformed by a secret medical experiment during the second world war. It gave him super strength and agility as it turned him instantly from an eight-stone weakling into the 240lb super patriot Captain America. He fought a secret war against the Nazis until he was trapped in ice a few days before its end by the Red Skull. The Avengers found his frozen body and bought him back to life in recent times to join them in their struggle against crime.

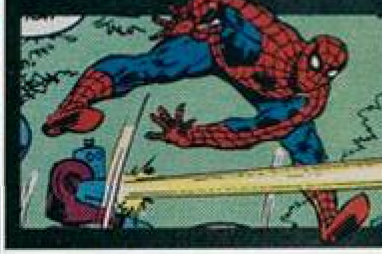


● Zaran takes a shield to the head.



● *Web-head mixes it with Machete.*

Spiderman: Peter Parker was your average everyday college science genius. One night while working in the lab he exposed a spider to an unprecedented dose of radiation. The spider then promptly bit him. With radio-active venom swilling around his veins he found he had the powers of a huge spider. He could climb walls, had incredible strength and a heightend instinctive awareness of danger. He designed a costume and 'web shooters' then touted himself as a masked vaudeville act. That was until the murder of his uncle turned him into the legendary crimefighter we know today.



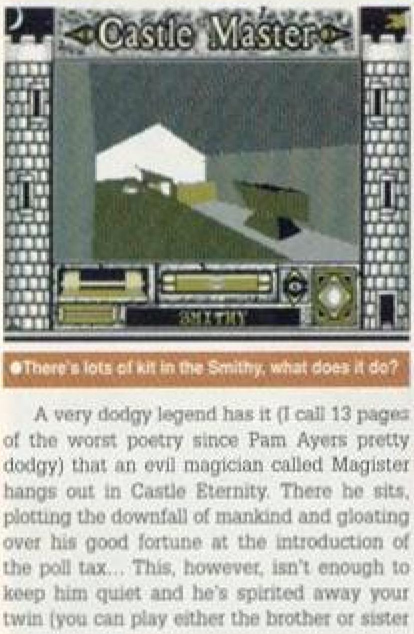
CASTLE MASTER

Domark/Incentive ● £9.99 cass, £14.99 disk ● joystick/keys

Who would be silly enough to wander around a spook-filled castle armed only with a catapult? "Anyone whose twin has been kidnapped" would be the easy answer, and that's the task that awaits you in *Castle Master*, the latest *Freescape* thriller by Incentive.



● Watch out, there's a ghost behind the flag



●There's lots of kit in the Smithy, what does it do?



● The drawbridge is open, the adventure about to begin. Are you ready to challenge the Castle Master?

A very dodgy legend has it (I call 13 pages of the worst poetry since Pam Ayers pretty dodgy) that an evil magician called Magister hangs out in Castle Eternity. There he sits, plotting the downfall of mankind and gloating over his good fortune at the introduction of the poll tax... This, however, isn't enough to keep him quiet and he's spirited away your twin (you can play either the brother or sister and they have different skills) to one of the towers, and if they are going to see another sunrise, you'd better get into rescue mode – like now!

The only weapons you've got when you arrive at the dark and dangerous castle are your wits and a few rocks. Which is OK, because everybody knows even the biggest, meanest ghosts in the world flee in terror at the first sign of pebbles! (OK, maybe not) Undeterred, you prepare for the adventure that's about to begin.

A quick stroll around the castle serves to remind you of two things. Firstly how smart the world of *Freescape* is, with all its smooth-moving 3D landscapes and buildings, and secondly how darned sly those Incentive bods are. Round the back you can find a large boulder that apparently does nowt (don't believe it, though) and the wizard's hut, which is conveniently locked. So it's back to the drawbridge and time to bung a brick up at that funny white box to the left. Switching to aim mode, just line that cursor up and throw.

AA MASTER GAME

Boff! Mind you're not standing too close to that thar' drawbridge when it comes down, or you'll find your knight/knight-ess a tad shorter than they were a few seconds before. Flat and dead is a better description. Remember that this is *Freescape*, the land where the scenery hurts. A quick scurry into the courtyard, and you know the games afoot...

There are buildings to explore and towers to climb in the bid to find your sibling. There's one major improvement, though, that experienced Freescapers have been crying out for. Now you can touch things! Before, there were only two ways to do things, shoot 'em or step on 'em. In *CM* you actually get to 'action' things, but only, of course, when you are within arm's reach. So if you accidentally brush against a door for which you've got a key, but didn't want to open it immediately, then nothing

BUT IS IT ART?

The clue pot for *Castle Master* takes the form of an epic poem. Now for everybody about to be plunged into the nightmare that is an English exam, cast your peepers on this. If you thought Chaucer was vague and hard to decipher, just cop this:

Dare not sneer or turn aside
I hold no portal yawning wide
For sibling scum
With dribbling gum
Don't struggle I'm your Guide

At last a fortress worthy of his name
From whence to tame man's willful spirit once again
Magister stretched his sphere and pulsed his brain
Then woke the rested storms to rise and aim and maim"

We don't think Bill Shakespeare's got much to worry about.

ARE YOU A CASTLE MASTER?

Hokey dokey, get those pencils sharpened and those brains in gear. *AA* has large pile of unmarked, non-sequential, crisp, crinkly blue ones sitting on Rod's desk just waiting to be won by the best *Castle Master* mapper. Send in your entries ASAP, and the first one of printable standards to hit our mailbox will appear in a future *Cheat Mode*.



● The place is littered with helpful (!) riddles, read them carefully they may save your life!



● Ballroom, is this some kind of sick joke?



● The big slab in the corner's a ghost. Kill it now!!!

happens until you 'action' the door and bring the key into play.

A big part of *CM* are the spirits. These little devils have a nasty habit of generating strength throughout the game. If you don't top enough of them then their combined power will tip the spirit level (groan!) in their favour and it's goodnight ladies. These ghosts pop up in many of the castle's rooms and so be quick on the draw with that catapult if you want to keep the strength up to a reasonable level.

The main objects of your search (apart from your Bro'/Sis') are keys and potions. Keys allow you to enter locked areas and potions give you fun abilities such as 'stone travel' – which allows you to catapult yourself about the place through windows and the like. Keys are always specific for certain doors and that nice, if sometimes evil, magician has labelled them all for you so you know which keys do what. He's also left little messages telling you exactly what each room is, which doesn't give the game away but it does help in the mapping.

The *Freescape* is better this time than ever before. It's faster, smoother and less glitchy, making it easier to spot those objects that are only just in view. The sound effects are their normal rudimentary selves, just bleeps and bangs, but you don't really need them, because it's a graphical feast for the eyes first and foremost.

The game plays like a real adventure – but none of this text-only nonsense. Actions have visible results and this makes it more immediate and more dangerous. Saving the game everytime something is achieved is a must if you want to avoid going out of your tree with frustration. Initially, there doesn't seem to be as much to do here as in *Total Eclipse*, but the whole style of the game is different, with four separate towers that are only occasionally linked. It's also the least friendly *Freescape* game to date, which may put off the unititated as they spend seeming hours wandering the maze-like catacombs. Veterans of *Driller* and beyond will simply take it as a personal challenge, laid down by the boys and girls from Aldermaston.

A classic exercise in *Freescape*, it's not as breathtaking as the previous outings simply because it's now been seen before. But until *Bloodwych* makes it out of the gates of Castle Mirrorsoft, it has the park to itself in the 3D adventure stakes.

SECOND OPINION

Well, er, y'know... I have to admit I'm not a huge Freescape *fan. I'm also not a fan of swords and sorcery, wizards and castles. I think I'd stick with* Total Eclipse. *RL*

GREEN SCREEN

Castle green looks fine! (a Bristol joke).

Incentive has continued to hone its very special style, creating 'total' games that require thought, luck and good joystick control to see you through. With a manual that gives instructions, hints and tips through its epic poem, the game's a complete package. Hours of intense gaming are guaranteed, but for the frustration that always accompanies such games it's hard to say it's fun! Well, it's fun when you've beaten the *Castle*, but an irritating compulsion until then. Remember keep your guard up and spirits down, or there'll be trouble! TW

FIRST DAY TARGET SCORE

1,000,000 points

The Verdict

GRAPHICS **95%**
- ☐ Solid 3D strikes again.
- ☐ The best *Freescape* to date.

SONICS **05%**
- ■ No music.
- ■ Too few effects.

GRAB FACTOR **88%**
- ☐ Getting into the castle's a cynch.
- ■ But where do you begin?

STAYING POWER **94%**
- ☐ A huge game, four towers, one sibling and masses of spooks.
- ☐ Save game facility makes it finishable.

AA RATING **91%**
- ☐ A true Castle Mastergame.



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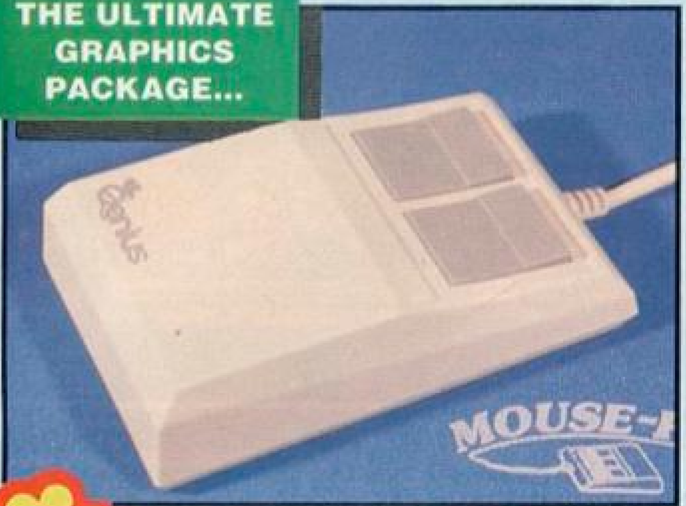
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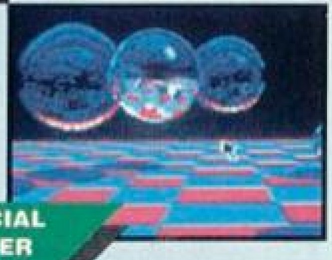
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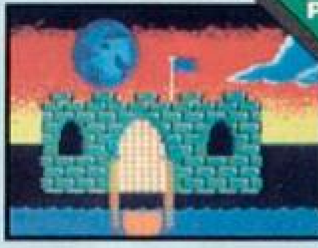
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X-OUT

Rainbow Arts ● £9.99 cass, £14.99 disk joystick/keys



● Shoot that snake rider.



● The big bad beastie at the end of the level goes topless!

In the darkest reaches of inner space, deep beneath the waves, a lone submariner is struggling to stop a disaster. A disaster that has big bug eyes, lurid green scales and is looking for lunch!



● The enemies come in all shapes and sizes.

X-Out is the first of a new wave of underwater shoot-em-ups, one where the aliens have got bored of flying through space just to get fried, and decided to take a dip instead.

The core game is a scrolling fire fight through undersea caves, killing so many slime-featured creatures that it's easier to weigh the carcasses than count the points. The locations include ice caves and volcanoes, and as the playing area's three screens high, the right path is often less than obvious. Wave after wave of aquatic exotica glide towards you firing away, and you've got to blow them fin from fin while keeping well clear of the walls. Throw in some gun-meltingly hard mid and end-of-level nasties, and you know you're onto a good, if not altogether safe, thing.

That, however, is only half the story, and the best of *X-Out* comes first. In ordinary shoot-em-ups you only get to 'power up' with special weapons as the stage progresses, whereas here you get these powers right at the off. The game opens in an underwater arms and sub dealers where you're given the choice of all the fire-power a growing psycho-killer could wish for.

First you choose a ship. There are four basic models, each with differing attributes: the cheaper it is the fewer weapons it can carry, but the more you can afford (nine being the maximum). Then you get down to the heavy business of weapon selection and positioning them on the craft. Everything from basic shot strength to the number and style of protective satellites you carry is changeable, and of course certain combinations are better for certain sections. More shops follow en route where you can spend all those lovely points you earned getting there.

Of all the weapons on offer, the ones you can't refuse are the drone satellites. Once placed on the ship, they fly in a pre-determined pattern set by you – handy if you happen to know attacks will come from a set direction on the next stage. And there are some fun, if illogical, little flame numbers. The fire claws squeeze together, frying all in between, while the flame-thrower sends a blast far ahead of you. Energy walls and missiles are also available, just to add a little more spice.

These innovations would all be in vain if the graphics couldn't deliver, but you've no worries there. One of the major reasons for an early death is stunned inaction due to the array of enemies, their quality, and the vast number flitting toward you at any one time. And no matter how frantic the action gets, they just don't slow down.

The graphics may be wonderful, but the sound isn't so great. You're limited to the usual ongoing spot-effects as you wade into another batch of aliens, but that's your lot.

The ships move fast, which is just as well as everything goes critical, real quick. The drone ships are initially off-putting, causing more death than they prevent, but once further into the level they cease to be a luxury and become a necessity. Some special weapons too can cause confusion, as they need extra key commands to activate.

Shoot-outs need some magical spark to set them ahead of the pack. *X-Out*'s ship designer system is just such inspiration. It allows you to experiment and re-orientate the whole scenario by using different outrageous strategies. How far can a ship with no armour get? What's the most devastating arsenal you can assemble on a big ship? When this level of tactical planning is applied to a fast and furious fire fight, then it's obvious you're in for a treat.

Dip into the briny with *X-Out* and get into some serious laser-powered destruction. You may be outnumbered, but you'll never be out gunned!

TW

SECOND OPINION

How do they make it so colourful, and so fast? The best shoot-em-up I've seen for a long, long time. RL

GREEN SCREEN

A waste of great colour, but playable.

AA RAVE!



● Level Two pretties are even more dangerous.

FIRST DAY TARGET SCORE

Complete Level One

The Verdict

GRAPHICS **90%**

- Whole armies of varied and fast-moving sprites.
- Massive level guardians.

SONICS **61%**

- Standard effects.

GRAB FACTOR **94%**

- Never have so few ships had so many guns!
- Designer system is great fun.

STAYING POWER **81%**

- Loads of levels.
- Fiendishly hard to complete.

AA RATING 86%

- The most innovative shoot-em-up for yonks.

TURBOSOFT

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LASER SQUAD EXPANSION KIT 2

Target Games ● £4 cass, £6 disk joystick/keys

Remember *Laser Squad* – Mastergame from *AA49*? Well, it's back with a vengeance.

For those who don't know, *Laser Squad* is wargame that concentrates on small scale skirmishes. You're put in command of a small unit of troops, typically between five and ten men, with instructions to carry out a mission.

With limited cash resources you must buy armour and weapons, juggling your figures to come up with the best combination. Once kitted out, it's into the fray, running around the battlefield vying for tactical position and blasting the enemy with futuristic hardware.

The game works via a series of turns. On your turn you can perform actions such as moving men, picking up objects and firing. Each unit is allocated a number of 'action points' to carry out these activities. You must use them wisely – running out of action points in the middle of a wide open space is not a good idea.

Three different scenarios accompanied the original *Laser Squad*. Also available at the time of release was *Expansion Kit One*, adding a couple of additional games (The disk version of *Laser Squad* included all five scenarios). Now Target games has released Expansion Kit Two, with a pair of brand new scenarios to test your tactical wargaming to the full (you still need the original game disk to run it).

The first of the new games is called *The Stardrive*. The Rebels have been working away on a powerful new fighter for their continuing struggle against the oppressive Federation. It seems that a bunch of mercenaries, known by the terrifying name of *The Engineers* (*ulp! – ed*), have nicked a vital component and taken it back to their underworld base. A platoon of squaddies – the Seventh Brigade – are under orders to retrieve the Stardrive at all costs. They have to work their way through the robot-infested sewers beneath the city which the Engineers call home. Once through the smelly sluices, the boys have to force their way into the hideout, find the device and get back in one piece.

The second scenario, *Laser Platoon*, involves all-out war between the Rebels and the Federation. Both sides have control of one half of a moonbase. The objective is to take the other half. So important is the battle that both sides are drafting in as many men as possible, and reinforcements are beamed down into the combat zone at regular intervals. There's no surrender. Total elimination of the opposition is the only way to win.

The Stardrive is one of the toughest Laser Squad scenarios to date. The Rebels have to move fast. The sewers really are robot-infested. Destroy a robot and it re-generates after a few turns. The Engineers can use this to their advantage, hiding out in strategic positions, ready to pick off the laser squad as they make their way across the map. Once arrived at the hideout the rebels have to force their way in, and the only way through is via a few security doors. Clue – a Las-Cutter is a vital piece of equipment if you're to have any hope of completeing the mission.

Laser Platoon is a real bloodbath. The game is set to last up to 255 turns (i.e. indefinitely), and the constant resupply of units means that you could be in charge of up to 10 men at a time. Weapons and armour are dirt cheap, so you can equip yourself with Auto-Cannons, Rocket Launchers, and all the best hardware. Life too is cheap, and you'll find that tit-for-tat killings knock down the amount of troops you have at an alarming rate. The map is exactly symetrical, with both sides in control of equal areas at the start of the game. The only way to win is total oblitiration of the enemy - and that counts for both sides.

The computer plays a good game in both scenarios. As with all *Laser Squad* games, though, the real fun is to be had with the two-player version (the computer opponent isn't that smart). The second game especially is brilliant, and turns out to be a real massacre.

Expansion Kit Two makes a change from previous *Laser Squad* scenarios. It adds even more strategy and gameplay to a release simply oozing with the stuff anyway. If you don't have *Laser Squad* already, our advice is simple. BUY IT! AW

SECOND OPINION

***Laser Squad** is like chess with guns. Against a human opponent it is one of the classic games of our time.* RL

GREEN SCREEN

A shame but not a tragedy.

FIRST DAY TARGET SCORE

Capture the Stardrive on Level 1

The Verdict

GRAPHICS 85%

☐ Clear and uncluttered.

SONICS 30%

☐ Fairly basic, but they let you know exactly what's going on.

GRAB FACTOR 90%

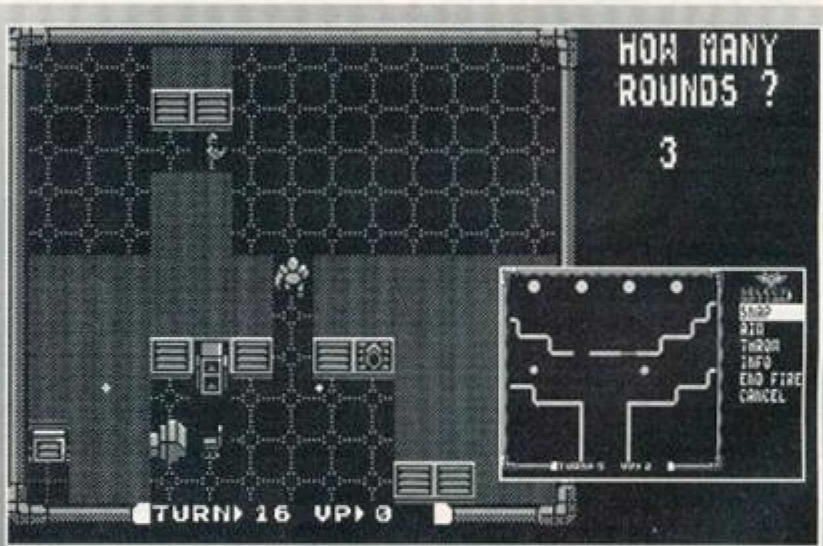
■ The original scenarios pinned you down a fraction quicker.

STAYING POWER ...97%

☐ These extra scenarios are BIG.

AA RATING 93%

☐ Two excellent additions to a game that was excellent already.





● Cap

BILLY THE KID

Virgin Mastertronic ● £1.99 cass joystick/keys



What better basis for a lightgun game could there be than the exploits of ace gunslinger *Billy The Kid*?

The game has three different stages. First you try your hand at blasting innocent bottles and cans, getting the old shootin' eye ready. Then, if you prove good enough, it's on to a bank robbery and a gunfight with the Sheriff. The bank job's simply a case of bopping people who are daft enough to put their heads above cover, annihilating the posse in a set time limit. The Gunfight is a test of luck and speed. It only lasts for a few seconds but it's the game's highpoint.



● Can you hit a tin can at ten paces?

As with all these 'new' lightgun games there's the same game using joystick and keys on the flip side. This one's even better on keys because the slower cursor movement gives you less time to get shots off. A good fun budget, this game uses the lightgun well and will make a great addition to any Magnum psycho's cannon fodder collection. TW

SECOND OPINION
Enjoyable Wild West romp, but a bit short on gameplay. AW

GREEN SCREEN
Only two colours less!

FIRST DAY TARGET SCORE
Kill the first level sheriff

The Verdict

GRAPHICS	55%
SONICS	31%
GRAB FACTOR	77%
STAYING POWER	61%
AA RATING	**64%**

F16 FIGHTING FALCON

Virgin Mastertronic ● £1.99 cass joystick/keys

Once upon time there was a game called *Afterburner*. Software houses noticed that plane-based shoot-em-downs were fun and sold profoundly well. *Fighting Falcon* is *Afterburner's* Lightgun clone.

The oddest, and most notable, aspect of the game is the controls. To avoid enemy fire, you shoot yourself in the tail! Then – supposedly – your plane swings away to safety. You've no choice where it goes, it just moves.

The enemy are dealt with by – you've guessed it – shooting them too! So on screen there's a whole host of things to shoot and no real need to be accurate. If you kill the enemy that's about to kill you, there's no need to move. If you miss and hit yourself, then you move and the danger's past.

The game moves too fast for lightgun control, which is naturally vague, to be effective or even appear to be effective. TW

SECOND OPINION
Just couldn't get the hang of it. RL

GREEN SCREEN
Even less fun.



● And it plays worse than it looks

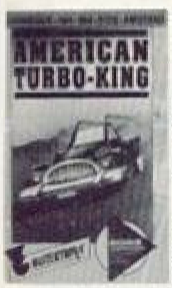
FIRST DAY TARGET SCORE
Finish the first mission

The Verdict

GRAPHICS	61%
SONICS	29%
GRAB FACTOR	16%
STAYING POWER	34%
AA RATING	**44%**

AMERICAN TURBO KING

Virgin Mastertronic ● £1.99 cass joystick/keys



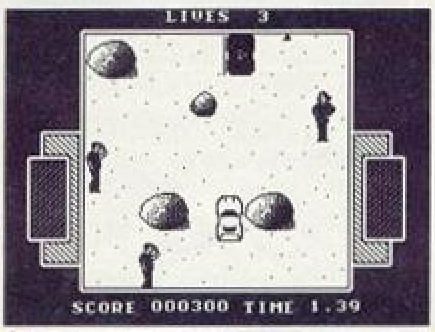
A car game controlled with a gun? Yup, it sounds daft – and *is* daft. In *Turbo King* your *BMX/Super Sprint* sim-style car has to weave its way through a series of obstacles, trying to finish a race (and finish first).

The direction of your motor is controlled by shooting pads at either side of the screen for turn left or right. Forward and reverse is simply a matter of blasting at the car. Nothing too difficult there, and that's the problem. Once you've got the line right for the shooting there's little else to it. The obstacles and jumps are either totally avoidable or destined to destroy car after car whatever you do.

There are loads of 'different' courses to race over but they're all essentially the same, just with different colours and the obstacles in a more difficult order. TW

SECOND OPINION
If you ask me, Virgin has shot itself in the foot with this one (after a few attempts) RL

GREEN SCREEN
Not really any worse.



● Don't drive into the rocks! But I suppose you knew that...

FIRST DAY TARGET SCORE
Win the first race

The Verdict

GRAPHICS	31%
SONICS	26%
GRAB FACTOR	46%
STAYING POWER	61%
AA RATING	**39%**

ENTERPRISE

Mastertronic ● £2.99 cass joystick/keys

Lost in space? You will be when you play *Enterprise*, the latest budget re-release from Mastertronic. It's another of those space trading games where you fly around the galaxy trading goods with interstellar lifeforms. Buy cheap and sell dear. All the fun of the stock-market, only in outer space.

SECOND OPINION

It's like a feeble cross between Captain Blood *and* Elite, *and I didn't go much on those, either – sorry!* *RL*

GREEN SCREEN

Aliens look good in green.

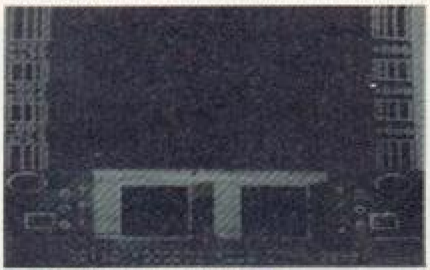
Enterprise is an *Elite* clone, but doesn't touch it in gameplay. The goods traded are simply called Class A minerals, Class B minerals and so on through to Class P minerals. There are reputed to be five billion planets to visit, but in practice these are all the same. In *Elite*, all the planets have unique names, descriptions, population data, and various other factors that add interest and character to the game. Here you just have the barest information to go on.



● Talking to a strange and curious alien

The most important aspect that's missing from the game is a combat section. There are no pirates to fight off, no traders to ambush, and generally nothing to do. Outer space is thus extremely boring. Once you come out of hyperspace it's simply a case of flying toward a planet, and twiddling your thumbs till you get there.

The best part of the game is when you land on a planet and meet an alien. A little animated face appears and 'talks' to you. It tries to reply intelligently to your sentences, with varying degrees of sucess. It can be quite amusing for a while. General chit-chat doesn't achieve anything though, and certain necessary key phrases are brought up by pressing the function keys. These include lines which actually get things done, like asking: "How much is your fuel?"



● Somewhere in the depths of space...

Enterprise may keep you amused for an hour or two. It's fairly well programmed and has some nice graphical touches. There isn't enough depth or atmosphere to keep your interest for much longer than that, though. **AW**

FIRST DAY TARGET SCORE

Buy something!

The Verdict

GRAPHICS **48%**

- □ Talking alien looks good.
- ■ Outer space is very boring.

SONICS **20%**

- ■ Annoying bleeping all the way though the game.

GRAB FACTOR **68%**

- □ Alien conversations are fun.

STAYING POWER ... **25%**

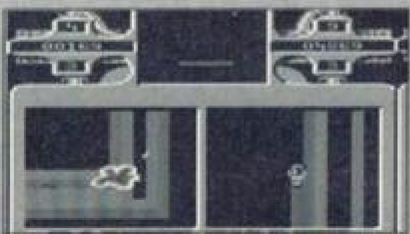
- ■ A shallow game with not a lot to do.

AA RATING **30%**

- ■ Wasn't good first time round. It certainly isn't now.

RASTER RUNNER

Mastertronic ● £2.99 cass joystick/keys



● The blue streak meets his maker

Remember *Tron*? That was the computer animated film where the programs were alive, and fought each other in deadly duels. Remember the Light Cycles? They were the motorbike-like machines that left behind a trail of solid light – collision with which spelt certain death. Well, that's *Raster Runner*. A *Tron* clone where you're pitted against an oponent on Plasma Bikes.

The object is simple: Don't crash! Easier said than done, though. The arena soon gets filled up, making manouvering more and more difficult.

The two cycles start side by side. Two scrolling windows show a small area around each cycle. At the top of the screen is a panel that displays both players' scores. Also present is a radar screen. This shows both players represented as dots, and the lines they leave behind.

If you're trapped in a corner you can use an energy shield. It allows you to go through previously formed barriers. However, you're limited to just three uses per round. The game lasts until one player has crashed ten times. Sounds a long time, but it comes quickly enough.

Your competitor can be either human or computer – but it's more fun against another player. The alarmingly fast scrolling doesn't put the computer off in the same way that it does a person, and so the competition is a little unfair. Nevertheless, the computer can be beaten. Once you discover a winning technique then it's possible to win most of the time. AW

FIRST DAY TARGET SCORE

Top the high-score

SECOND OPINION

An old concept, but fun when played against another human opponent. *TW*

GREEN SCREEN

The Verdict

GRAPHICS **47%**

- □ Polished graphics.
- ■ But not a lot of them.

SONICS **50%**

- □ Title tune isn't bad.
- ■ FX Limited to engine noises and explosions.

GRAB FACTOR **52%**

- ■ Looks unimpressive.
- □ You get hooked fairly quickly.

STAYING POWER ... **73%**

- □ Two well-matched players will play all day.
- ■ No variety.

AA RATING **59%**

- □ Limited, unoriginal, but fun.



● Head to head action in *Raster Runner*

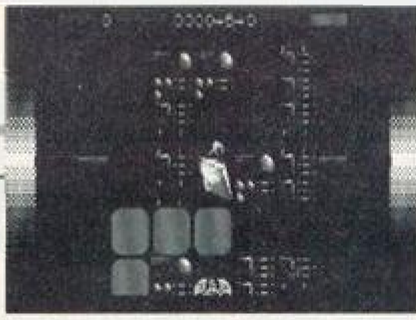
MAZE MANIA

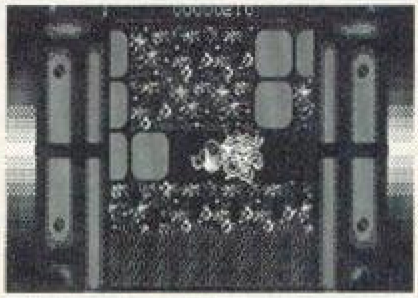
Hewson● £9.99cass, £14.99 disk joystick/keys

What a predicament! Flippo's stuck in a maze high up in the outer reaches of space. He's not allowed out until he changes all the floor tiles from one colour to another. To do this, not suprisingly perhaps, he has to flip them all over. Easier said than done. To hinder his quest, energy-zapping aliens patrol the maze. Whacking great holes too are numerous, one wrong step sending poor Flippo tumbling into the void.

Maze Mania is reminiscent of *Skweek*. The colour changing concept is the same as,to a certain extent, is the gameplay. The monsters move around slowly at first, but speed up in the later levels. A bonus collectable moves around the each level, grabbing it gives you a suprise goodie.

The game gives you have a birds eye view of Flippo's rather large head, as the screen moves around him. The scrolling is smooth and flicker free. And as Flippo walks





● Flippin' good fun!

along his massive feet stride away beneath him. Very nicely animated. In fact all the sprites are well animated but...

The game suffers graphically. The background graphics are nothing special, but acceptable. The tiles are about what you'd expect, and flip nicely. What really lets the game down are the sprites. The characters consist of white outlines, with whatever is beneath them showing though. Fine if you've got a Spectrum, but not so good on the CPC.

Sound is limited to the flipping of tiles and a few other spot effects. Although sparse, it doesn't detract seriously from the game, and at least it isn't annoying.

Maze Mania is too easy if anything. The monsters can be easily avoided by jumping over them. Collision with a beastie isn't fatal, but drains your life force. Fortunately you have enough to last quite a few close scrapes. Mis-time a jump over a hole though, and it's curtains.

All in all then, it has bad graphics, limited sound and is too easy. Still, it's not a bad game, and despite the criticisms has an undefined quality that keeps you coming back for more. AW

SECOND OPINION

"Just another maze game, with a few dodgy sprites to boot" TW

GREEN SCREEN

The sprites are clearer in green!

FIRST DAY TARGET SCORE

25,000 points

The Verdict

GRAPHICS 36%
- □ Nice animation.
- ■ Undisguised Speccy graphics.

SONICS 40%
- ■ Effects are ok, but no tune.

GRAB FACTOR 59%
- □ Easy to get into.
- ■ Looks unisipiring.

STAYING POWER ...61%
- □ Rapid acceleration through levels.
- ■ Everything's the same.

AA RATING 60%

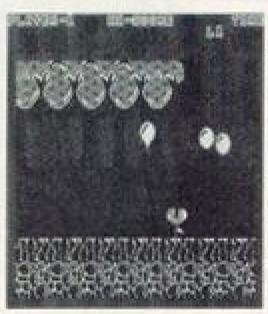
- ■ Could have been so much better...

HOPPIN' MAD

Encore● £2.99cass, joystick/keys

Hoppin' Mad is a strange game. You have to guide a bunch of bouncing balls through a perilous landscape. Perilous because there are various pricklies to dodge - both stationary ones on the ground and mobile in the guise of creatures. Contact with them pops one of your balls. Thankfully, not everything is deadly. Apples hang enticingly from branches, but the real objective is the balloons that float around. Collect ten and you're through to the next level.

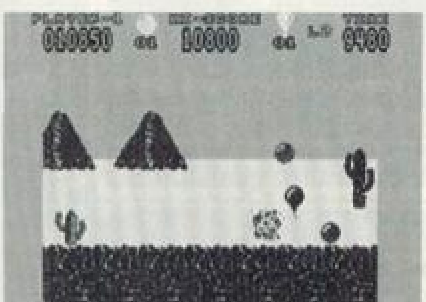
You have four balls per life, that bounce continiously from right to left. You control the height and speed at which they bounce. When one gets punctured then it fades away into nothingness, a warning not to be so careless with the remainder. The balloons float eratically in the opposite direction, and you need good timing to bounce up and get them at the right instant. The different levels aren't very different - the graphics change, but they basically do the same things.



Graphically the game stinks. Yep, it's the dreaded Speccy conversion again, and although colourful (too colourful), suffers from the monotone graphics of the CPCs poor cousin. The choice of colour too, is suprising. It seems that the most garish combination possible has been chosen, and looks like something produced by a three year old at nursery school.

In-game sound consists basically of boings, boings and more boings. The music on the title screen is good though. Certainly more 'bouncy' than the sound effects.

Hoppin' Mad treads a thin line between being incredibly frustrating and maddeningly addictive. The control method is difficult to master, but offers a lot of scope once it has been learned. Whichever way you look at it though, it's a load of old balls... AW



● Whoops! Missed the balloon, and punctured in the process!

SECOND OPINION

"Novel idea, but what a dodgy job they've done. Still it's very colorful, shame all the shades clash!" TW

GREEN SCREEN

At least you don't see those dreadful colours

The Verdict

GRAPHICS 25%
- ■ Yuk!

SONICS 65%
- □ Jolly little tune.
- ■ Few in-game effects.

GRAB FACTOR 52%
- □ Interesting controls method.

STAYING POWER ...43%
- ■ Very little variety.

AA RATING 48%

- □ Nothing special

PSYCHO HOPPER

Mastertronic Plus ● £2.99 cass joystick/keys

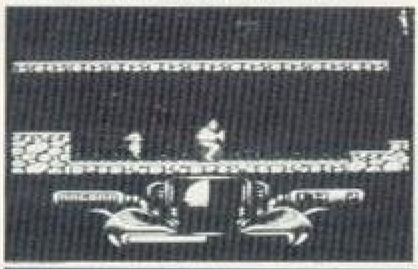
If you gaze into the night sky you may see a small star - just to the left of the Dog Star's hind quarters - shinning its little heart out. That's the world of dreams, central planet in the belt of unreality. In few years time this will become a holiday playground for the rich, famous and seriously deranged. For on this planet - especially during the season of high unlikelyhood - anything can happen. It's the kind of place where the idea of tackling millions of nasties while riding a bubble of poison gas seems a sensible, nay even probable, way to spend a vacation!

Yup, that holiday maker is you. To escape this recreational wonderland a thin balloon, filled with the deadliest gas ever even thought of, has to be bounced through a variety of caverns and caves. In your hands is a blunderbus (don't ask questions about narrative logic just shoot) to fend off the hordes of nightmare creatures heading your way. To complete each level four pieces of a magical skull have to be collected, before the bats and baddies puncture the balloon you're sitting on.

The bubble just bounces, to many heights and over great lengths. The trick is persuading it to leap onto the upper platform and beneath the overhangs, enabling you to grab the jewelled skull. Bats, gnomes, skeletons, and multiple other monsters - more suited to nightmares than dreams - are out to spoil your holiday. Your only two options are bouncing out of their energy sapping path (impossible) or shooting them (extremely difficult), because every time they touch the bubble it gets one stage nearer to bursting point. When it bursts then the poor little rider (your own good self) rapidly chokes to death as evil chemical vapours fill the air.

Psycho Hopper is a real hand ache'er if you try to play on joystick. It's one of those games where you try to force the 'stick a little harder to help your man make that jump. Time and time again the bubble will narrowly miss its target, sending you rebounding into a fang of bats (ok smarty, what's the collective noun for bats then?). It's extremely frustrating, mind boggling so in fact, trying to negotiate the correct route without falling down a hole when you shouldn't, or onto those rather nasty looking spikes.

You've a generous upper limit on blasts from the blunderbus, which is just as well, as there are a vast number of heavy weight beasties out there in Dreamland. Three lives help in this respect too, as much time and many hits are taken, while you try to get on the right track. Death it seems is a popular way of spending your summer hol's if you are rich, famous and/or seriously deranged.



● Bouncy, bouncy!

Cast a glance at Psycho Hopper and your initial response is disbelief, 'this is a budget'? The graphics exhibit real character with a bold use of colour and imaginative sprites. It simply looks too smart to be on sale at £2.99.

SECOND OPINION

"Bouncing on a space hopper is a novel way to travel, but it turns out to be the most irritating form of transport since British Rail!" **AW**

GREEN SCREEN

Plain backgrounds mean good green viz

Play it for a while and you'll soon see why it never made on the full price circuit. It's addictive and fun, but too darned difficult. On a scale of one to ten on the toughness front this baby scores a mighty 23.7!

There's an awful lot to be said for games that are hard to finish, but this one's hard to start as well. Completing the first level is possible, but not without losing at least one very valuable life in the process. Games should be graduated, so as you learn to play, you to stay alive for longer, thus earning more points. In *Psycho Hopper* this patently not the case. You can get rather good at the game and still see no noticeable change in your score potential, which is a little disconcerting.

A solid budget title this has everything from a great game concept through to excellent graphic implementation. It falls down heavily on its playability. After a few tense hours of bouncing and blasting, even its bubbly fun wears thin and you are left with a game in which there's precious little chance of success. And it would be nice to see the rest of the game, because it should be a stunner. These levels, will alas, just have to remain a mystery, at least until Uncle Phil gets his paws on it! TW

FIRST DAY TARGET SCORE

Finish level two

The Verdict

GRAPHICS **88%**
- □ Humourous nighmare graphics.
- □ Way above the normal budget pics.

SONICS **52%**
- □ Neat spot effects, all boing and bang.
- ■ Shame about the wobbly music.

GRAB FACTOR **45%**
- □ Hard on the beginner.
- ■ Hard on the veteran!

STAYING POWER **54%**
- ■ A real monitor puching game...
- ■ ...it's just too hard!

AA RATING 67%

- ■ Great idea but far to difficult!



● Psycho Hopper - Run, run, run away!

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PUFFY'S SAGA

Ubisoft ● £9.99 cass, £14.99 disk joystick/keys

Poor old Puffy. There he was, taking his girlfriend 'up the woods' (*oh yeah, say no more – ed*), when he made a wrong turning somewhere. Now the pair of them are trapped in a strange alien maze-world.

The only way out is, for some inexplicable reason, to collect all the orange dots scattered around each maze. Of course, it wouldn't be an alien world without aliens, and aliens there are aplenty. Nasty red ghosts haunt the corridors; disembodied eyes follow you around; fire-breathing dragons try to fry you to a crisp. Not a very pleasant place at all!



● Keep your energy up by eating the grub.

It's not all doom and gloom, though. Littered around the mazes are various inanimate objects that are there to help you: food to keep you going and keys to unlock doors and chests (which contain suprise goodies). And there's also magic to collect and use in your time of need...

Sound familiar? Yep, *Puffy's Saga* is a *Gauntlet* clone. A very cute *Gauntlet* clone, though. The mazes are in a very similar in style and layout to the coin-op classic. It features the same type of puzzles – keys and doors, for example, work in an identical fashion. There are also walls that disappear when you collect a certain icon, and walls that you can shoot your way through.

The feel of the game is, however, different to *Gauntlet*. The cartoon style of the graphics take cuteness to the extreme – so much so that you'll be reaching for a brown paper bag if your stomach's not strong enough.

Mr Puffy himself is a very stout fellow. In fact he and his girlfriend share the build and colour of a tennis ball. All that distinguishes the pair from each other is that she wears a red ribbon in their hair – unless Puffy himself is a bit of a strange one...

In fact, they bear more than a passing resemblance to Mr and Ms *Pacman*. And in the game you can chose to control either character. Puffy is more powerful, but Pufyn (for that's the damsel's name) is a better mover (*that's enough inuendo – ed*).

The on-screen playing area is fairly small, but scrolls quickly and smoothly. The sprites too are tiny. They are well detailed, however, and because the characters are simple ball-shaped beings, they're very good looking, graphically.



● Aarrggghh! – It's the fire-breathing dragons!

The principle of the game is familiar. All the dots must be collected before you can pass to the next level. Also to be collected are items that give you extra firepower, invulnerablity, speed and all the usual stuff. And magic 'Goms' can be accumulated and used at appropriate times. Here you can select the effect that the magic has. You can use them to boost your flagging life force, swap between Puffy and Pufyn, or to conjour up a map to aid your direction-finding.



One aspect of *Gauntlet* that *Puffy's Saga* doesn't duplicate is a two-player mode. This is a real pity, as it was one of the former's most attractive features. The ability for two people to play similtaneously side by side or against each other added a lot to the game.

> **SECOND OPINION**
>
> *An instant classic. It combines elements of Gauntlet, Skweek and Marble Madness hilariously to create a thoroughly enjoyable and very addictive game.* TW
>
> **GREEN SCREEN**
>
> *Hard going in parts.*

The first seven levels of *Puffy's Saga* are played in a set order. After that they're selected randomly. This enables you to explore many different levels without having to play for hours to get to the same point.

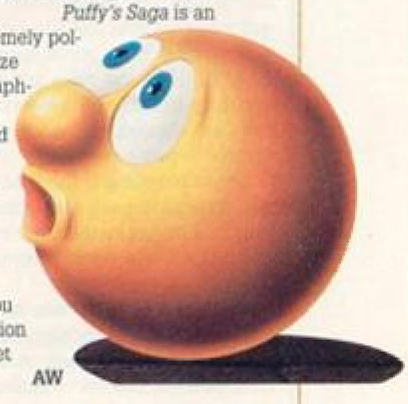
Your energy depletes at a fair rate, and to stem the flow you've got to find the grub that is generously littered all over the place. Contact with anything that moves does no good at all to your constitution, and accelerates the rate that your life force slips away. Ghosts are most common foes on the earlier levels. These can be killed with just a few shots, but walking into the corpses left behind is just as deadly. Later levels introduce the acid pools, eyes, snakes and the fire-breathing dragons – the most deadly of all.



● Ouch. Running the gauntlet of the laser banks.

The music on the title screen is bears a curious resemblance to the *Ghostbusters* theme tune. It doesn't actually play through the game itself, but that is more than made up for by the brilliant spot effects that accompany the game. Instead of the usual blips and beeps, digitised squeaks and chomps play throughout. The speech, though not exactly intelligible, sounds cute and fits in well with the game's theme. "Hello Puffy" it chortles when you start, and "Oh oh", and "Going to die" it wails when health gets critical.

Puffy's Saga is an extremely polished maze game. The graphics and sound are suberb and alone are enough to lift it above the crowd. It won't be to everyone's taste, but if you enjoy exploration games then get puffin'! AW



FIRST DAY TARGET SCORE

Reach Level 5

The Verdict

GRAPHICS **84%**
- □ Smooth detailed sprites
- ■ A bit on the small size

SONICS **89%**
- □ Great digitized FX

GRAB FACTOR **88%**
- □ Nice theme tune
- □ More polish than a can of Mr Sheen.

STAYING POWER **79%**
- □ Lots of screens
- ■ Will there be enough?

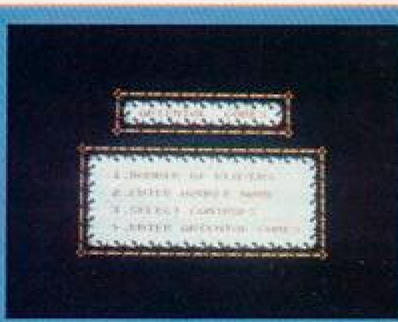
AA RATING 85%

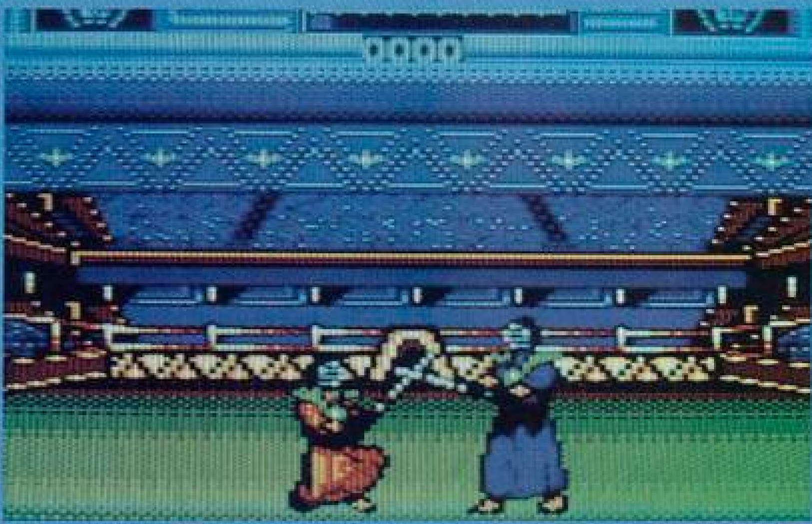
- □ Mega-cute maze game.

ORIENTAL GAMES

Firebird ● £9.99 cass, £14.99 disk joystick/keys







● *Oriental Games* – four different ways of bashing the (ahem) out of your enemies...

Ah so, Humble Englishman, you think you can take on finest Oriental masters and beat them at their own game? Then take your place in *Oriental Games*, where the one true master shall be found. For so it is written.

Oriental Games is a multi-event martial arts beat-em-up (try saying *that* with a mouth full of chips). It's based on four different combat sports that are so (ah so) popular in the Far East.

Kung Fu is first. This is a real kick-em-in event. The action is fast and furious. It's all about out-manouvering your opponent – being in the right place to deliver the final death blow.

Kendo is next. Armed with a big wooden stick you have to bash your opponents' brains out while avoiding the same fate yourself. This is the only event where you have any weapon other than foot and fist.

Freestyle is a street-wise variation on Kung Fu. Here the rules are more relaxed – and dirty fighting is the way to win. Head butts are allowed, and are good for inflicting damage to your adversary.

Sumo Wrestling is the final event. Two fat men attempt to push each other out of a ring. Fans of Sally and all the other massive men on Channel 4's late night programme will love this one.

Each event has its own knock-out (knock-out being quite appropriate) competition. Eight entrants use their stength, skill and stamina in an attempt to outwit each other in the various forms of combat and win the coveted Gold Medal. Silver and Bronze are also available – and you'll have to pretty good to win *any* of them. Medals are also awarded for overall performance in all four events, but you'll have to be exceptional to rank anywhere in this comprehensive category.

Even in the first round, the challengers are difficult to beat. It's not impossible, however, and after a bit of practice you'll find yourself in with a fighting chance (groan). As you progress through the tournament, your adverseries get tougher and tougher. And when you're finally ousted from the competition, the remaining entrants carry on without you. The results of the fights are displayed on screen as the fights are played. Fortunately, you don't have to sit through all of this every time – and a few quick stabs on the fire button passes this section by.



Up to four human players can take apart in the competition. They are always pitted against a computer-controlled fighter in the first round, so to have a decent two-player game, both players will have to win a couple of bouts before they can do battle against each other. A pity, as the greatest challenge in any game is always found playing against another person. The game has no practice option, either,

FIGHTING MAD

The common image of martial arts conjours up a vision of Oriental gentlemen throwing death stars at each other, performing double backward somersaults and simultaneously flooring several opponents with a series of death dealing kicks and punches, all delivered in a wonderful, gravity-defying slo-mo...

The reality is very different from the Hollywood interpretation, of course. Martial Arts can be roughly defined as any form of combat that follows a set of pre-defined rules and is taught from one generation to the next. They have developed in societies where combat is central to the way of life – both spiritually and socially, and have evolved independently in many cultures all over the world. While it's true that the Chinese have developed a greater variety of disciplines and the Japanese have developed martial arts most highly, the Orient is far from being the only corner of the world where fighting skills have been learned. Outside the Orient, India is another major centre for martial arts.

Although considered today mainly as a sport, the roots of martial arts lie in far more warlike times. The Japanese have developed fighting skills so highly because of the primitive fuedal system that has shaped so much of the country's history. It's something to do with all the raw fish they eat, too...



● Adam (orange trunks) fights it out with Wong Tong, the



● Freestyle fighting is fast and dirty.



● How do you fight in a bathrobe?



● Player One bites the carpet.

which would have been the best way to implement an instant two-player game.

The conventional system of fighting moves has been employed, with different key or joystick combinations resulting in different actions. As usual with this type of game, your first go consists of leaping around the screen aimlessly, having no clear idea of how to do any particular move. After a few goes that changes, and your flying kicks and karate chops become more tuned in to your joystick movements.



The gameplay is very slick. The action is non-stop, and taking your eyes off the screen for a second could spell your doom. Energy is represented by bars for each player, and is depleted by alarming amounts, depending on the type of blow your opponent lands. If you manage to avoid being hit for some time then your strength is slowly replenished.

However... It's hard to hit your enemy with anything resembling accuracy – or it was for us. Your best bet's to leap around frantically and launch a crafty attack when the other guy isn't looking...

An authentic Oriental jingle plays through the title screen. Authentic enough to have you reaching for that volume control before you unleash some real karate chops on your CPC. Sound is severely limited throughout the game itself, though. No music, and just a mere smattering of spot effects. A bell sounds at the start of each match, and there's a fairly convincing *thwack* every time your punch or kick hits home, but apart from that the game is silent.

Graphically the game is a black belt. The sprites are large, flicker-free and nicely animated – and include a close-up of your expression as you're dealt yet another blow by your assailant. The backgrounds too are fairly well drawn – not that you really take much notice of them in the thick of battle.

All in all, *Oriental Games* is a tough fighting game with a lot of gameplay. The four sections are similar in concept, but different enough to offer plenty of variety. It does miss out on a couple of things, especially an easy human vs. human option, but pretty graphics and plenty of challenge go a long way towards making up for such comparatively minor shortcomings. **AW**

SECOND OPINION

I wouldn't know a Kendo stick if it poked me in the eye. Even so, Oriental Games was great fun – until I realised all you ever get is more of the same. A really excellent game for combat fans, limited for the rest of us. **RL**

GREEN SCREEN

A green belt is nothing to be ashamed of.

FIRST DAY TARGET SCORE

Win a Gold Medal!

The Verdict

GRAPHICS **86%**
- Good solid sprites and animation.

SONICS **51%**
- Convincing Japanese jingle on title screen.
- Only the barest spot effects in play.

GRAB FACTOR **82%**
- Very good-looking.
- A bit too difficult at first.

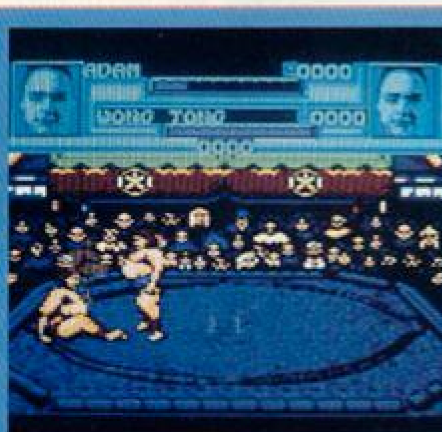
STAYING POWER .. **79%**
- Plenty of fighting moves to master.
- Lacks proper human vs human option.

AA RATING **78%**

- One of the better beat-em-ups.







human mountain (mind you, Adam's looking a bit fleshy too....)

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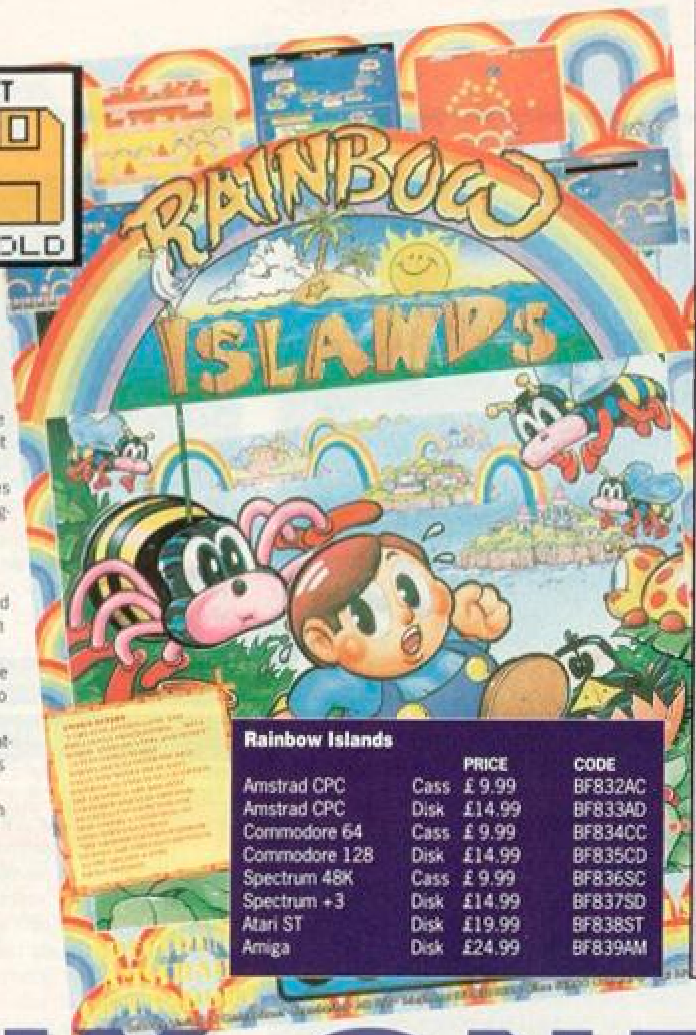
ST FORMAT GOLD

Rainbow Islands
from Ocean

This follow up to Bubble Bobbie looks set to be as much of a hit as Ocean's last cutesy game, New Zealand Story. It combines colourful visuals with frighteningly addictive gameplay, with the result that you end up with one hell of a game.

Graphics have been downloaded from the original arcade version and the moves are just the same. Lead Bub and Bob to the top levels by firing rainbows into the air and then climbing them. When you reach the top of a platform, you can collect thousands of bonus points. There are seven islands to complete, each one more challenging than the last.

'Graftgold's ST Version of Rainbow Islands is one of the best coin-op conversions to have appeared in along time' Maff Evans, ST Format



Rainbow Islands

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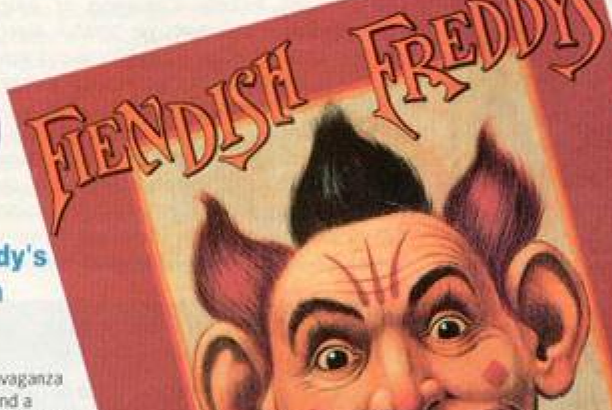
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Fiendish Freddy's Big Top of Fun
from Mindscape

Mindscape's circus extravaganza brings you thrills, spills and a whole barrel o' laughs. Dive from high-boards, walk tightropes, be fired from cannons, swing on trapezes, throw knifes and juggle in a desperate bid to save the circus from the big bad bank.

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Fiendish Freddy

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Amiga	Disk	£24.99	BF854AM



G 2



Black Tiger
from U S Gold

US Gold have had major hits with Strider and Ghouls 'n' Ghosts. Now comes their latest horizontally-scrolling action game, Black Tiger.
In a similar fashion to Ghouls, the objective is to charge through horizontally-scrolling levels, climbing ladders and following red arrows to the end of the level. Along the way, fight ugly gargoyles, snakes and even deadly orchids using your powerful weaponry. When the going gets tough, disappear inside the shop, pick up some extra weapons, and go out for another merry blast.
If you're a fan of horizontally-scrolling action games, you'll love this one.

Black Tiger

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4

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BALROG

More helpful hints and adventuring lore from the Hairy One

Cower in the presence of the Balrog, mortals! The Balrog has been busy exploring the land of Kerovnia this month, bringing back clues and tips for all those wanderers stuck in a Magnetic Scrolls game...

Clue Sniffing with the Balrog

A Magnetic Scrolls Special in this month's *Cluepot*, as the Balg gives tips on every single Magnetic Scrolls game. Thanks to Joan Pancott, Fizban, Emma Heggie, Ludwig the Surreal Egg, Paul and Timothy Stitt, Hazis Dolgizas, Antcrusher, Adrian Forbes and Stuart Whyte. Special thanks goes to the anonymous reader who mapped *Slaine*.

Acheton
Bend in passage, E, Sx2 to marble slide, D (the next move will take you into a maze where the broadsword is in a fixed location, but the other objects are in random locations, so the following route will take you through the whole maze), S to lower levels of mine, S, NE, E, NW, S, NW, SE, NE, NW, E, W, N, SW, W, S, Nx3, get broadsword, Sx2, E, SW, W, S, NW (check that you now have: Turquoise Amulet, broadsword, platinum brooch, jade earrings, lead, opals and quartz), E to lodestone room.

Apache Gold
Show handbag to the crocodile.

Classic Adventure
Hall of the Mountain King: Play flute, drop bird (the snake has gone), drop cage, drop flute, S, get jewellery, N, E, S, get gold nugget, N to vast hall, Y2 to Jumble of Rock, Y2 to Large Room, PLUGH.

Corruption
• If you want to know what's going on at the meetings at 9:08 and 11:42 in Mr Hughes' office then LISTEN AT WOODEN DOOR.
• The cocaine is in the cistern in the cubicle. If you don't get the envelope which is in Margaret's office before 10:59, she takes it as she leaves and gives it to David. Try to OPEN the ENVELOPE.

Dun Darach
• The first thing you'll need is money, so go and win some. (A tip is to save the game when you first go into the gambling house, then put all of your money on table B. If you lose, reload your saved position. If you win, save again and repeat until you are rich).
• It helps if you put some money in the bank to gain interest while you are doing other things.
• The first thing you should buy is a Thieves' Licence from 83 Silver Street. Later it will also enable you to steal the Pearl from the strong-room, 1 North Wall.
• To buy something, you first pick it up and then offer the money.

Fish
Why make coffee yourself when there's an expert available?
To shut down the power station, turn off the protocopier and light switch in your apartment before turning the big switch off.

Guild of Thieves
• In the junk room, move the junk to make a new exit. It leads to the moat, where there is a night safe. You can put the castle's valuables in it without having to get them past the gatekeeper.
• While at the moat, if you have the maggot, (from the tin, under the gatekeeper's bed), the billiards cue, and the needle and cotton, (from the sewing box in the small bedroom), then tie the cotton to the cue, put the maggot on the needle, then lower the needle. This gives you a fish with which to feed the bear.
• Before you feed the fish to the bear, sprinkle it with rat poison found in the kitchen cupboard.

BALROG'S POST

• "Aren't Infocom games brilliant?" writes Dave Harvard of Fareham "...One of the things I like most about Infocom adventures is the lack of word matching exercises. I really do believe that if you let yourself get drawn in by the atmospheric descriptions and responses, the solutions to most problems are quite obvious. Let's face it, Balrog, *Lurking Horror* really *does* get your hair whiter than other adventures! I recall being visibly shaken climbing the "rope" in the Dome Room, only to find out later that it was a tentacle from the THING!" You're right Dave, *Lurking Horror* is an amazing adventure and very atmospheric - it is one of my favourite (Although the Balrog's hair is still definitely black!) Dave continues "One of my latest additions is *Scapeghost* by Level 9. What stunning graphics, especially by the Austins' standards!" Yep, the graphics in *Scapeghost* are very good, especially the lightning striking the church tower at the end of part one. It is a shame that some of the later Infocom games with graphics were never released on the Amstrad, as the Balg would have loved to have seen them. "One last question. In the Lords and Ladies column, should the adventures stated be solved, or is it OK if you are quite a way into them?" Well, when you become a Lord or Lady of Adventure you should have completed all the games on your list - then there is no chance of a reader wasting a stamp on someone who has gone less into a game than themselves!

• "Have you any hints for *Slaine*? We have got the eye from the phoenix, also taken the gold ring and buried it in the mine. On putting the eye of the phoenix into the furnace, the fire demon appears which you can kill, likewise with the gold ring when you bury it, an earth demon appears which you kill. Could you please help me in getting further in the game." writes F Collins. Unfortunately, I do not have any tips for *Slaine* (anybody want to send some?) However I do have a full map sent in by an anonymous reader, so I have printed it for you.

• The Balrog received his first bribe (a one pence piece!) glued to a very strange letter (even stranger than Bob Adams!) from Douglas Thompson, otherwise known as Sturm the Adventurer. Douglas wrote to join the *Bards Tale* club but also asks some profound questions: "Is the Balrog human? Is Broadley human? and Why did the World Start!?" He also enclosed a rather revealing picture of Trenton Webb "before the time warp accident left him terribly disfigured!" A warning to David – messing with Trenton the Space Marine is dangerous, messing with the Balrog is almost suicide but Broadley... Death!, make sure she doesn't catch you asking questions like that again!

Coming soon

Reviews of *Adlan*, Tower of Light and a round up of all of the readers games that the Balrog has received. Plus next month we have a special Topologika Clue Pot.

BARD'S TALE CLUB

Richard wants to be a member, as "I was staggered by the enormity of the game"
Richard Jamieson, 79 Land Street, Rothes, Aberlour, Banfshire IV33 7BB

James Hale is currently having problems getting his *Bard's Tale* to load.
Manor Barn, Ardens Grafton, Nr Alcester, Warks B49 6DR

"I have got characters with over 5,000 hit points and stacks of gold each. I can make a team full of whatever you want; just send me a blank cassette and an SAE. Despite this I still cannot get into either of the towers...
Stuart Park, 24 Old Gates Drive Blackburn Lancashire BB2 5BY

Gareth Eynen, 207 Labumum Grove, North End, Portsmouth, Hants P02 0HE

• The rat poison isn't needed to kill the rats. Simply hold the pipe at the top of the cellar, behind the door, and it will break. Open the valve to drown the rats, close the valve when the water is getting a bit high.

Jinxter

• The Wire Fence: Go to your back garden, get secateurs, go to the fence and cut wire with secateurs.

• The Bull: Go to your conservatory, get cloth, go to the bull, show cloth to bull and drop cloth.

• The Canoe: Go to your bedroom, look under bed, get sock, go to boat-house, get bung, put bung in sock, slide doors, S, put sock in hole, get paddle and put canoe in water.

Pawn

Tie rake and hoe (in palace shed) together with your shirt (or trousers). Go to big boulder, type lever boulder with rake, go to the peak, collect snow in the plant pot (also in shed under bench), go to the guru, put the water from the pot into the bowl and give it to the guru. Now go to the clearing, search the stump and you will get the pouch of colours. Mix them and you will have a light to use in the tree house.

HELP!

Two more adventurers require help. Can you help them in their hour of need? If so, write in and we will print the answer as soon as possible.

Adrian Forbes

• In *Jinxter*, can anyone tell me what to do with the carousel and how to get into the clock-maker's shop?

• In *Cutthroats*, can anyone tell me how to buy the boat etc? Is Johnny's gang the right gang to hang around with or should I follow McGinty?

M Sweetman

• In *Imagination*, what do I do with the pick-axe?"



Lords & Ladies of Adventure

Three more Lords and Ladies of Adventure this month to answer your every question. Don't forget to send a SAE when writing to them, though!

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CONTACTING THE BALROG

As always, the Balrog is interested in all matters adventurial, so write to The Balrog c/o *Amstrad Action*, and your letters will be sent by orc to the Balrog's Lair. All letters are read and your points, although not always printed, are always noted.



PROGRAMMING WITH THE BALROG

GAC hints thanks to Paul Robson (Don't worry Paul – I'll review your game soon!) If you have any hints or tips for writing an adventure game or using a creator please send them in!

1. GAC can't do conditions such as 'IF (ROOM > x AND ROOM < y)' where you may want to, say, print a message in rooms X to Y.

To overcome this, you could use a set of conditions with a marker:

```
HIGH        1 RESE n END
            2 IF (ROOM > x) SET n END
            3 IF (ROOM > y) RESE n END
            4 IF (SET? n) MESS m WAIT END
```

(I haven't included the brackets which *GAC* inserts automatically)

2. It also has problems with 'NO2', the second noun in an input.

Using *GAC*'s own example – 'PUT GOLD IN BOX', where

'PUT'=VERB n 'DROP'=VERB m
'GOLD'=NOUN x 'BOX'=NOUN Y

(a) IF (VERB n AND NOUN x AND NO2=y)....
Does not work
('PUT' AND 'GOLD' AND 'BOX')

(b) IF (NO2=y AND VERB n AND NOUN x)....
Works
('BOX' AND 'PUT' AND 'GOLD')

What if you want to say 'DROP GOLD IN BOX' as well as 'PUT'?

(c) IF (NO2=y AND VERB n XOR VERB m AND NOUN x).... Works
('BOX' AND 'PUT' XOR 'DROP' AND 'GOLD')

BUT 'DROP GOLD' also works, which is not what is required!

In fact, I can't find any combination which does work.

THIS works:

(d) IF (NO2=y AND (VERB n XOR VERB m) AND NOUN x)....
('BOX' AND ('PUT' XOR 'DROP') AND 'GOLD')

But, (again!) *GAC* erases the added brackets when you next view the condition. If you're prepared to not view it again, fine.

This also works and conditions are unchanged by *GAC*:

```
Local or Low  1 RESE a END
              2 IF (NO2=y) SET a END
              3 IF (VERB n XOR VERB m
              AND NOUN x AND SET? a)....
               ('PUT' XOR 'DROP' AND
               'GOLD' AND 'BOX')
```

3. Important for anyone who, like me, makes lots of mistakes or changes their mind often!

You've entered a message (or Room, Verb etc) and then decide to delete it. *GAC* does not reclaim the original memory used, but seems to flag the memory location as unwanted, leaving most of the text intact but unseen. It's better to leave the text as it stands, make a note of the message number (or verb etc.) and re-use the message at a later stage, changing the text of course.

I discovered this when I looked at some saved code and saw words which I had deleted. I did a print-out of everything and typed it all into an 'empty' *GAC*, saving about 5,000 bytes!

JUST FOR LAUGHS

More rib-ticklers this month from Simon Netherwood, Antcrusher and Stuart Whyte.

Big Sleaze

Try swearing and say Hi and Why.

Hollywood Hijinx

- Tried smelling the rose bush in "Garden, East"?
- Have you called the operator on the phone?
- How about putting on the catcher's mask?

Leather Goddesses of Phobos

- Try putting objects other than the jar into the machine – the rabbit turns into a rabbi.
- After getting the picture of Jean Harlow, open the door to the E.
- Ask your partner to kiss the frog.



Pipe Mania!!

ADDICTION BEYOND BELIEF!!

C and VG Feb 1990 94%

Pipe Mania is "a classic puzzle arcade game that is so addictive, it should come with a Government Health Warning"

Pipe Mania is a game of great ingenuity, simple in concept and friendishly challenging to play.

You'll need to act instinctively, but think strategically!

One wrong move, one brief hesitation or mis-placed pipe section, and you'll drown in a sea of slime!

ST Action

"Pipe Mania is a conceptually simple and cheeky game which is incredibly addictive"

Commodore User Screenstar

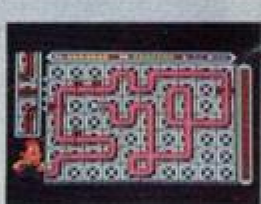
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Zero March 1990 92%

"Buy this game and you may never sleep again"

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"A puzzle game of great ingenuity and addictivity. Pipe Mania is simple in concept, fiendishly challenging in play, and attractive to look at"

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TYPE-INS

Adam Waring, the man keyboards love to hate is here. So get typing!

ACCOUNTS

Iain Kerr
Disk recomended

If your accounts are in a mess then this is the program for you. It lets you use your CPC to keep all your monetary matters in order.

Before you run the program for the first time, type in:

```
OPENOUT "bal":WRITE #9,your balance:CLOSEOUT
```

The program has several options. Some are more obvious than others. Here's a full listing of what everything does:

Start New Month.

Once selected, enter the name of the month and press enter. If no month is selected then the the present month will be used.

View Month.

All the accounts for that month will be listed. Pressing 'S' will stop the listing. In the bottom-most right window there is a two character code. The first tells us what speed the accounts are being printed at (0 for fast 1 for slow). Pressing 'S' again will turn the '1' into a '0' and pressing it again will turn it back again. The second letter of the code will show 'Y' if the listing paused and 'N' if it is not.

There are two windows on the bottom row. The right-most of the two windows show the total of the accounts already printed. The left window also shows the total but can be reset. This proves to be useful to find how much is spent in a day (only if the day's accounts are listed in order). To select this option simply press 'M' when in paused mode. To get out of pause mode simply press a key other than an option key.

Enter New Data.

Enter the data under the headings and press enter. To save the data type 'end' in the date window.

Typing 'mark' in the date window will reset the value in the bottom-left window (see View Month). Typing 'end' in the same window will save the data.

Edit Month.

The computer will list a line of the accounts and will wait for a key to be pressed. If 'S' (Skip) is pressed then the last line printed will be scrubbed from the file. (Except lines produced by inserting).

Pressing 'I' (Insert) will enable you to enter data. It is terminated by typing 'end' in the date window and then the program will continue with listing the accounts.

Debit Handler.

Changes menu to debit handler.

Credit Handler.

Changes menu to credit handler.

Loan Watch.

A useful function which enables the user to see how much has been paid or recieved from someone in a month or number of months.

Balance.

Prints the balance of the user and other variables.

Exit Program.

This routine resets the computer. The program should be exited through this routine.

Catalogue Disc.

Catalogues the disk.

Change Month.

Changes the present month.

Basic Command.

Enables the user to do sums. Type CONT to finish.

```
{LaAr} 10 ON ERROR GOTO 2640
{IlAl} 20 'Setup
{AsAm} 30 INK 0,13
{MuAl} 40 INK 1,3
{BqAo} 50 BORDER 13
{AqAo} 60 OPENIN"bal"
{FjAo} 70 INPUT#9,bal
{FpAo} 80 CLOSEIN
{EiAj} 90 '
{IsAk} 100 'Menu
{FjAm} 110 MODE 2
{DoAq} 120 LOCATE 22,8
{JmBl} 130 IF deb=1 THEN PRINT "Debit Handler."
{JnBl} 140 IF deb=0 THEN PRINT "Credit Handler."
{PjAp} 150 RESTORE 1800
{IxAn} 160 GOSUB 1690
{AoBs} 170 a$=INKEY$:IF a$="" OR a$>"c" OR a$<"1" T
        HEN 170
{ExAq} 180 a=VAL("&"+a$)
{FxAr} 190 IF a=0 THEN 170
{NsCj} 200 ON a GOSUB 230,500,790,1400,1000,990,103
        0,1280,1010,1020,1940,1380
{LoAm} 210 GOTO 110
{JxAj} 220 '
{NvAp} 230 'StartNewMonth
{FvAn} 240 GOSUB 1940
{CaAo} 250 m=3:GOSUB 2310
{NqAp} 260 OPENOUT month$
{AiAq} 270 t=0:r=0:m=0
{CiAp} 280 INPUT #1,"",a$
{BpAt} 290 IF a$="end" THEN 430
{KqAm} 300 IF a$="mark" THEN 390
{OaAr} 310 INPUT #2,"",b$
{JtAo} 320 INPUT #3,"",c$
{LxAp} 330 INPUT #4,"£",d
{CrAt} 340 WRITE #9,a$,b$,c$,d
{MhAs} 350 t=t+d:r=r+1:m=m+d
{JlAx} 360 IF r=15 THEN GOSUB 2060
{HmAn} 370 GOSUB 2100
{HtAl} 380 GOTO 280
{PxAm} 390 PRINT#2
{JuAm} 400 PRINT#3
{MjAl} 410 PRINT#4
{EkAt} 420 m=0:GOSUB 2100:GOTO 280
{JvAw} 430 IF deb=0 THEN bal=bal+t
{FwAx} 440 IF deb=1 THEN bal=bal-t
{AsAx} 450 IF i$="i" THEN RETURN
{HsAo} 460 CLOSEOUT
{RxAn} 470 RETURN
{KlAj} 480 '
{MxAo} 490 'ViewMonth
{OmAm} 500 GOSUB 1940
{OsAo} 510 m=1:GOSUB 2310
{HxAv} 520 t=0:r=0:m=0:d=0:sp=1
{AjAp} 530 OPENIN month$
{AmAk} 540 '
{JkAr} 550 INPUT #9,a$,b$,c$,d
{AkAo} 560 PRINT#1,a$
{NrAm} 570 PRINT#2,b$
{LiAn} 580 PRINT#3,c$
{LlAx} 590 IF d=0 THEN PRINT #4:GOTO 610
{MpBi} 600 PRINT#4,USING("£####.##-");d
{NjBn} 610 IF sp=1 THEN FOR x=1 TO 800:NEXT x
{AkAr} 620 r=r+1:t=t+d:m=m+d
{PiAn} 630 GOSUB 2100
{FrAx} 640 IF r=14 THEN GOSUB 2060
{FnAt} 650 IF d=0 THEN 690
{PuAm} 660 i$=INKEY$
{KlAw} 670 IF i$="s" THEN GOSUB 2130
{IpAn} 680 GOSUB 2270
{HkAt} 690 IF EOF=0 THEN 550
{BxAs} 700 PRINT #4,"———"
{RjAs} 710 PRINT #4,"Total =";
{LtBk} 720 PRINT #4,USING("£####.##-");t;
{EsAs} 730 PRINT #4,"Balance=";
{OvBk} 740 PRINT #4,USING("£####.##-");bal
{BxAq} 750 CALL &BB18
{ImAq} 760 CLOSEIN:RETURN
{BoAj} 770 '
{KnAn} 780 'EnterNewData
{JtAq} 790 m=2:GOSUB 2310
{KsAl} 800 r=0:m=0
{KnAo} 810 GOSUB 2020
{QmAo} 820 OPENIN month$
{JuAq} 830 OPENOUT "buffer"
{BtAs} 840 INPUT #9,a$,b$,c$,d
{NpAt} 850 WRITE #9,a$,b$,c$,d
{IxAo} 860 PRINT #1,a$
{PnAn} 870 PRINT #2,b$
{BtAo} 880 PRINT #3,c$
{JpBi} 890 IF d=0 THEN PRINT #4:GOTO 910
{FsBj} 900 PRINT#4,USING("£####.##-");d
{KjAp} 910 r=r+1:t=t+d:m=m+d
{AmBi} 920 IF r=14 THEN GOSUB 2060
{FvAo} 930 IF EOF=0 THEN 840
{CiAo} 940 CLOSEIN
{FkAm} 950 GOSUB 270
{NmAn} 960 |ERA,@month$
{NlAu} 970 |REN,@month$,"buffer"
{EjAn} 980 RETURN
{InAo} 990 deb=1:RETURN
{LvAq} 1000 deb=0:RETURN
{LjBn} 1010 OPENOUT"bal":WRITE #9,bal:CLOSEOUT:|BAS
        IC
```

```
{NvAw} 1020·CLS:CAT:CALL·&BB18:GOTO·110
{MtAj} 1030·'
{CxAo} 1040·'loanWatch
{LcAm} 1050·CLS:t=0
{RxAq} 1060·LOCATE·20,10
{PwAq} 1070·PRINT"Amount·";
{KoBl} 1080·IF·deb=0·THEN·INPUT·"paid·by·",paid$
{HtBm} 1090·IF·deb=1·THEN·INPUT·"paid·to·",paid$
{KrAq} 1100·LOCATE·20,11
{HjAw} 1110·INPUT·"in·the·month·of·",month$
{GvAo} 1120·GOSUB·2020
{GoAp} 1130·OPENIN·month$
{GwAs} 1140·INPUT·#9,a$,b$,c$,d
{AiBo} 1150·IF·UPPER$(paid$)=UPPER$(c$)·THEN·t=t+d
{CwAu} 1160·IF·EOF=0·THEN·1140
{OpAn} 1170·CLOSEIN
{RxAq} 1180·LOCATE·20,12
{HpBi} 1190·PRINT"is·";USING("£####.##-");t
{GtAo} 1200·pot=pot+t
{JrBs} 1210·LOCATE·23,15:PRINT·"Pot·holds·";U
         SING("£####.##-");pot
{AsBk} 1220·LOCATE·23,17:PRINT·"Reset·Pot·(y/n)."
{JkAx} 1230·i$=INKEY$:IF·i$=""·THEN·1230
{JsAv} 1240·IF·i$="y"·THEN·pot=0
{BxBo} 1250·LOCATE·23,17:PRINT"Back·to·Menu·(y/n)."
{JiBi} 1260·i$=INKEY$:IF·i$=""·THEN·1260
{CvBn} 1270·IF·i$="y"·THEN·RETURN·ELSE·1030
{FjAm} 1280·'balance
{EgAm} 1290·CLS
{GsAq} 1300·LOCATE·20,10
{BpBo} 1310·PRINT·"Balance·=·";USING("£####.##-
         ");bal
{JjBq} 1320·LOCATE·20,11:PRINT·"Present·Month·is·";
{KnBp} 1330·IF·month$=""·THEN·PRINT"........":GOTO·
         1350
{PuAt} 1340·PRINT·UPPER$(month$)
{IwAq} 1350·LOCATE·20,12
{MpBl} 1360·PRINT·"Pot·Holds·";USING("£####.##-
         ");pot
{DkAu} 1370·CALL·&BB18:RETURN
{AvBu} 1380·CLS:PRINT"Type·CONT·to·start·again.":EN
         D:RETURN
{EvAk} 1390·'
{KtAm} 1400·GOSUB·1950
{KqAq} 1410·m=4:GOSUB·2310
{DrAv} 1420·t=0:r=0:m=0:d=0:sp=1
{JkAw} 1430·PRINT#1:PRINT#2:PRINT#3:PRINT#4
{BpAp} 1440·OPENIN·month$
{LaAp} 1450·OPENOUT·month$
{KwAr} 1460·INPUT·#9,a$,b$,c$,d
{AnAs} 1470·PRINT#1,a$:PRINT#2,b$
{HuAo} 1480·PRINT#3,c$
{GjAx} 1490·IF·r=14·THEN·GOSUB·2060
{CtAl} 1500·r=r+1
{WtAn} 1510·GOSUB·2100
{MxBj} 1520·IF·d=0·THEN·PRINT#4:GOTO··1540
{BvBj} 1530·PRINT#4,USING("£####.##-");d
{LqBi} 1540·i$=INKEY$:IF·i$=""·THEN·1540
{AvBn} 1550·IF·i$="s"·THEN·GOSUB·1640:GOTO·1620
{BjAu} 1560·IF·i$<>"i"·THEN·1610
{OsAt} 1570·WRITE·#9,a$,b$,c$,d
{CvAo} 1580·GOSUB·280
{AwBm} 1590·PRINT·#1,CHR$(8);CHR$(17);CHR$(13);
{OkAm} 1600·GOTO·1620
{IuAu} 1610·WRITE·#9,a$,b$,c$,d
{NiAu} 1620·IF·EOF=0·THEN·1460
{HrAx} 1630·CLOSEOUT:CLOSEIN:RETURN
{CrBv} 1640·FOR·x=1·TO·4:PRINT#x,CHR$(8);CHR$(17);C
         HR$(11):NEXT
{EkAw} 1650·IF·deb=0·THEN·bal=bal-d
{ApBi} 1660·IF·deb=1·THEN·bal=bal+d
{HiAn} 1670·RETURN
{IxAs} 1680·CALL·&BB18:STOP
{GzAj} 1690·'
{FxAr} 1700·'Print·Messages
{EtAn} 1710·READ·x
{LmAv} 1720·IF·x=0·THEN·RETURN
{AsAn} 1730·READ·y
{MrAn} 1740·READ·a$
{IiAp} 1750·LOCATE·x,y
{HtAm} 1760·PRINT·a$
{ImAm} 1770·GOTO·1710
{IwAk} 1780·'
{OxAl} 1790·'Data
{AlBj} 1800·DATA·20,10,1·Start·New·Month.
{NuAw} 1810·DATA·20,11,2·View·Month
{OmAx} 1820·DATA·20,12,3·Enter·New·Data.
{HoAw} 1830·DATA·20,13,4·Edit·Month.
{AiAx} 1840·DATA·20,14,5·Credit·Handler.
{PjAw} 1850·DATA·20,15,6·Debit·Handler.
{AiAx} 1860·DATA·20,16,7·Loan·Watch.
{GsAu} 1870·DATA·20,17,8·Balance.
{LcBi} 1880·DATA·20,18,9·Exit·Program.
{MgBj} 1890·DATA·20,19,A·Catalogue·Disc.
{IvAv} 1900·DATA·20,20,B·Change·month.
{BvBi} 1910·DATA·20,21,C·Basic·Command.
{AlAm} 1920·DATA·0
{FlAk} 1930·'
{HkAm} 1940·'EnterMonth
{CxAr} 1950·MODE·2:LOCATE·32,10
{IoAt} 1960·q=INSTR(month$,".")
{CxAv} 1970·IF·q=0·THEN·PRINT·month$
{CtBm} 1980·IF·q>0·THEN·PRINT·LEFT$(month$,q-1)
{CoAq} 1990·LOCATE·20,10
{LwAu} 2000·INPUT·"Enter·Month·",i$
{AmBi} 2010·IF·i$<>""·THEN·month$=i$
{OnAt} 2020·q=INSTR(month$,".")
{BvBp} 2030·IF·deb=1·AND·q=0·THEN·month$=month$+".d
         b"
{MpBs} 2040·IF·deb=0·AND·q>0·THEN·month$=MID$(month
         $,1,q-1)
{AxAn} 2050·RETURN
{MsAk} 2060·'cls
{NtBj} 2070·r=0:CALL·&BB18:FOR·x=1·TO·4
{MnAm} 2080·CLS#x
{JsAp} 2090·NEXT·x:RETURN
{KiBi} 2100·PRINT·#6,USING("£####.##");m
{GtBj} 2110·PRINT·#7,USING("£####.##");t
{BnAo} 2120·RETURN
{CwAm} 2130·'pause
{PkAr} 2140·st=1:GOSUB·2270
{JnAo} 2150·i$=INKEY$
{CmAu} 2160·IF·i$=""·THEN·2150
{DuAv} 2170·IF·i$<>"s"·THEN·2210
{PpBl} 2180·IF·sp=1·THEN·sp=0·ELSE·sp=1
{CkAp} 2190·GOSUB·2270
{MoAn} 2200·GOTO·2150
{DpBi} 2210·IF·i$<>"m"·THEN·st=0:RETURN
{EoAu} 2220·PRINT·#1,"——";:m=0
{EpAq} 2230·PRINT#1:PRINT#2
{KwAq} 2240·PRINT#3:PRINT#4
{LiAo} 2250·GOSUB·2100
{RcAn} 2260·GOTO·2150
{MoAl} 2270·'Codes
{FtAv} 2280·PRINT·#5,CHR$(48+sp);
{MsBr} 2290·IF·st=1·THEN·PRINT#5,"Y";·ELSE·PRINT·#5
         ,"N";
{JlAn} 2300·RETURN
{PjBr} 2310·MODE·2:PLOT·0,40:DRAW·0,392:DRAW·639,39
         2:DRAW·639,40
{GoAo} 2320·DRAW·0,40
{KlBn} 2330·PLOT·81,6:DRAW·81,392:PLOT·488,6:DRAW·4
         88,392
{KmAt} 2340·PLOT·0,367:DRAW·639,367
{EnAu} 2350·PLOT·280,40:DRAW·280,393
{DwAo} 2360·LOCATE·4,2
{DqBn} 2370·PRINT"Date":LOCATE·20,2:PRINT"Notes..."
{IvAo} 2380·LOCATE·43,2
{IqBj} 2390·IF·deb=0·THEN·PRINT·"Paid·by"
{PnBk} 2400·IF·deb=1·THEN·PRINT·"Paid·to"
{BmAv} 2410·LOCATE·69,2:PRINT"Amount."
{JhAs} 2420·WINDOW·13,80,24,25
{HoBm} 2430·IF·deb=0·THEN·PRINT·"Credit·Handler.";
{OmBn} 2440·IF·deb=1·THEN·PRINT·"Debit·Handler.·";
{NgBk} 2450·IF·m=1·THEN·PRINT"···View·Month.·····";
{HkBq} 2460·IF·m=2·THEN·PRINT"···Enter·new·Data.·";
{BvBp} 2470·IF·m=3·THEN·PRINT"···Start·New·Month.";
{GwBo} 2480·IF·m=4·THEN·PRINT"···Edit·Month.·····";
{KmAt} 2490·q=INSTR(month$,".")
{MtBl} 2500·IF·q=0·THEN·PRINT·"··";UPPER$(month$);
{EmBu} 2510·IF·q>0·THEN·PRINT·"··";UPPER$(LEFT$(mon
         th$,q-1));
{AvAr} 2520·WINDOW·12,34,4,22
{LmBr} 2530·PLOT·0,6:DRAW·639,6:DRAW·639,40:DRAW·0,
         40:DRAW·0,6
{BtBo} 2540·PLOT·226,6:DRAW·226,38:PLOT·374,6:DRAW·
         374,38
{MjAv} 2550·PLOT·608,6:DRAW·608,40
{JtAr} 2560·WINDOW·#1,2,10,4,22
{PqAt} 2570·WINDOW·#2,12,34,4,22
{OoAt} 2580·WINDOW·#4,63,79,4,22
{GuAr} 2590·WINDOW·#3,37,61,4,22
{PsAt} 2600·WINDOW·#6,2,10,24,24
{HiAv} 2610·WINDOW·#7,63,75,24,24
{LpAu} 2620·WINDOW·#5,78,79,24,24
{KvAp} 2630·m=0:GOTO·2100
{OlBo} 2640·IF·DERR<>146·THEN·CALL·&BB18:GOTO·2700
{JuAl} 2650·PRINT
{GuAo} 2660·PRINT"Try·Again·(y/n)."
{LoAx} 2670·i$=INKEY$:IF·i$=""·THEN·2670
{CkAm} 2680·CLS
{AlAx} 2690·IF·i$="y"·THEN·RESUME
{GrAp} 2700·RESUME·110
{LmAj} 2710·' ●
```

COLOURED

Jeroen Erkens

This colourful little number from down-under displays text as you've never seen it before. The routine only works in mode one, but Jeroen says he is considering re-writing it to work with modes zero and two as well. Get to it Jeroen!

```
{AiAx} 1·'·Mutli-coloured·characters
{FxAt} 2·'·By·Jeroen·Erkens
{EuAq} 3·'·26·Charlcott·st
{IxAq} 4·'·Christchurch·5
{AlAo} 5·'·New·Zealand
{CuBr} 10·MODE·1:INK·0,0:BORDER·0:INK·1,25:INK·2,24
         :INK·3,15
{MrAt} 20·PRINT"Setting·up·..."
{AsAr} 30·FOR·a=0·TO·11:tot=0
{GmAv} 40··FOR·b=0·TO·15:READ·c$
{BnAx} 50··x=VAL("&"+c$):POKE·(&6000+a*16+b),x
{CuAo} 60···tot=tot+x
{PnAu} 70··NEXT:READ·chk$
{BqBx} 80··IF·VAL("&"+chk$)<>tot·THEN·PRINT·"Error·
         in·line·";(170+a*10)
{KoAk} 90·NEXT
{JpAq} 100·CALL·&6000:MODE·1
{AiBr} 110·PRINT"Multi-coloured·characters·effec
         tive..."
```

```
{LuBj} 120 PRINT"To restore text to normal,"
{JwBp} 130 PRINT"type 'call &bb4e' and press return
       ."
{BpBk} 140 PRINT"This works only in mode 1."
{OmAk} 150 PRINT
{OqAq} 160 ' machine code data
{MqCi} 170 DATA CD,51,BB,3E,C3,21,1D,60,32,D3,BD,22
       ,D4,BD,CD,03,7BD
{OlCi} 180 DATA B9,CD,06,B9,3E,00,CD,A5,BB,22,C4,60
       ,C9,F5,CD,1A,89B
{NsBu} 190 DATA BC,22,C2,60,F1,5F,16,00,06,03,CB,22
       ,CB,23,D2,32,64E
{OwBw} 200 DATA 60,14,10,F6,2A,C4,60,19,22,C0,60,CD
       ,51,60,CD,51,6BF
{AiCn} 210 DATA 60,06,04,C5,CD,66,60,C1,10,F9,CD,7A
       ,60,CD,7A,60,7DA
{JqBw} 220 DATA C9,CD,B3,60,F5,E6,F0,77,23,F1,CB,27
       ,CB,27,CB,27,9D5
{BoBv} 230 DATA CB,27,77,C3,9D,60,CD,B3,60,32,C6,60
       ,CD,A5,60,77,8AA
{AjCm} 240 DATA 23,3A,C6,60,E6,0F,77,C3,9D,60,CD,B3
       ,60,32,C6,60,7E7
{BqCi} 250 DATA CD,A5,60,80,77,23,3A,C6,60,E6,0F,4F
       ,47,3E,00,CB,6E0
{OtBv} 260 DATA 21,CB,21,CB,21,CB,21,79,80,77,C3,9D
       ,60,11,FF,07,72C
{DwBx} 270 DATA 19,22,C2,60,C9,E6,F0,47,CB,2F,CB,2F
       ,CB,2F,CB,2F,82B
{LvBx} 280 DATA E6,0F,C9,2A,C0,60,23,22,C0,60,2B,7E
       ,2A,C2,60,C9,72B ●
```

DATA MAKER

Graeme Rowles

We last printed a data creator listing about six months ago (AA50 to be precise). Graeme has come up with a super-deluxe version though, and it's well worth typing in.

Data Maker takes the tedium out of compiling long lists of hex data. Simply load the data into memory, answer a few simple questions and the program does the rest...

```
{BuAn} 1 'Datamake
{OvAn} 2 'By GE Rowles
{BqAn} 3 '7.1.90
{MpAr} 10 ON ERROR GOTO 450
{CkBk} 20 MODE 2:PAPER 0:PEN 1:CALL &BC02
{FjAu} 30 INPUT"Enter start address: ",st
{BrAv} 40 INPUT"Enter end address: ",en
{OxBw} 50 PRINT"Do you want to record to tape or di
       sc ? (T/D) ";
{MuAw} 60 a$=LOWER$(INKEY$):IF a$=""THEN 60
{FpAu} 70 IF a$="t"THEN PRINT"TAPE":GOTO 100
{FwBj} 80 IF a$="d"THEN PRINT"DISC":GOTO 100
{EjAs} 90 PRINT CHR$(7);:GOTO 60
{QdBn} 100 INPUT"Enter the first line number: ",lin
{LuAu} 110 INPUT"Enter line step: ",stp
{BlBo} 120 INPUT"How many hex numbers per line";i:i
       =i-1
{KdBq} 130 PRINT"Do you want to LOAD a binary file
       ? (Y/N)"
{DoBj} 140 l$=LOWER$(INKEY$):IF l$=""THEN 140
{KnAr} 150 IF l$="n"THEN 270
{PjBm} 160 IF l$<>"y"THEN PRINT CHR$(7);:GOTO 140
{KwAu} 170 PRINT"Tape or disc ? (T/D)"
{DiBk} 180 m$=LOWER$(INKEY$):IF m$=""THEN 180
{FpBj} 190 IF m$="d"THEN |DISC ELSE |TAPE
{KsBj} 200 IF m$<>"t"AND m$<>"d"THEN 180
{JjBv} 210 INPUT"Enter start address: ",addr:IF add
       r<0 THEN addr=addr+65536
{CuBl} 220 IF addr<HIMEM THEN MEMORY addr-1
{MaBj} 230 LINE INPUT"Enter file name: ",filn$
{ClAr} 240 LOAD filn$,addr
{BmAr} 250 PRINT"All loaded !
{KtAj} 260 '
{BsBi} 270 IF a$="t"THEN |TAPE ELSE |DISC
{CpAr} 280 OPENOUT"datas.asc"
{OnBu} 290 PRINT#9,lin;"for a=&";HEX$(st);" to &";H
       EX$(en);" step";i
{JjAo} 300 lin=lin+stp
{JiBr} 310 PRINT#9,lin;"tot=0:for b=a to a+&";HEX$(
       i)
{HzAo} 320 lin=lin+stp
{KnCo} 330 PRINT#9,lin;"read a$:poke b,val("+CHR$(3
       4)+"&"+CHR$(34)+"+a$):tot=tot+peek(b)
{GjAo} 340 lin=lin+stp
{MoDv} 350 PRINT#9,lin;"next:read b$:if val("+CHR$(
       34)+"&"+CHR$(34)+"+b$)<>tot then ?"+CHR$
       (34)+"Error in data  Sorry !"+CHR$(34)+"
       :?:stop
{KrAp} 360 lin=lin+stp
{DuCl} 370 PRINT#9,lin;"next:?"+CHR$(34)+"Data okay
        -- Well done !!"+CHR$(34)+":?:end"
{HtBm} 380 FOR a=st TO en STEP i:tot=0:lin=lin+stp
{PmAs} 390 PRINT#9,lin;"data ";
{FvAr} 400 FOR b=a TO a+i
{DnAx} 410 PRINT#9,HEX$(PEEK(b),2);",";
{BjBo} 420 tot=tot+PEEK(b):NEXT:PRINT#9,HEX$(tot,4)
{PlAj} 430 NEXT
{AnAr} 440 CLOSEOUT:END
{LtCi} 450 IF ERL=220 AND ERR=7 THEN PRINT"I can't
       do that !":PRINT:END
{CoBn} 460 IF ERL=190 AND ERR=28 THEN RESUME NEXT
{JjAt} 470 ON ERROR GOTO 0:RESUME ●
```

MASTER WORD

Neil Hopkinson

Fans of the guess the colour game *Mastermind* will love this word variation.

Up to four players can play. Each player takes it in turns to guess the five letter word that the computer is thinking of. When you enter a word the computer will tell you:

Which letters are in the right order (coloured green);

Which letters are in the word, but not in the right order (white).

The quicker you guess the word, the more points you score! At the end of the game the computer tells you what it thinks of your score. There are five rounds per game, and the computer knows over 200 words.

```
{LiAo} 10 REM Masterword
{PoAr} 20 REM By Neil Hopkinson
{JuAo} 30 ENV 1,5,-2,3
{IqAo} 40 GOSUB 1430
{EkAq} 50 MODE 1:BORDER 0
{PpAx} 60 INK 0,0:INK 1,14:INK 2,21:INK 3,5
{JkAl} 70 GOSUB 510
{FoAm} 80 GOSUB 680
{OsAo} 90 GOSUB 1900
{JpAk} 100 CLS
{PlAm} 110 GOSUB 880
{PlAq} 120 FOR rd%=1 TO 5
{EvAl} 130 CLS
{EnBt} 140 PEN 2:LOCATE 11,12:PRINT "Round ";USING
       "#";rd%:GOSUB 1420
{PjAp} 150 FOR pl%=1 TO play%
{AlAl} 160 CLS
{KrAn} 170 PEN 1
{DoAp} 180 LOCATE 11,12
{HkAx} 190 PRINT "Player";USING "#";pl%
{PvAn} 200 GOSUB 1420
{ItAl} 210 CLS
{DjAn} 220 GOSUB 980
{HwBn} 230 RANDOMIZE TIME:w$=wd$((RND*236)+1):w2$=w
       $
{EoAl} 240 l%=3
{FoAn} 250 GOSUB 1160
{OtAn} 260 GOSUB 1300
{IxAu} 270 IF right%=5 THEN 390
{PaAm} 280 l%=l%+2
{MkBi} 290 IF l%<21 THEN w$=w2$:GOTO 250
{EwAl} 300 PEN 2
{IrBk} 310 LOCATE 10,23:PRINT "Bad luck!";
{LjAv} 320 LOCATE 12,21:PRINT w2$;
{AsAn} 330 GOSUB 1420
{MvAl} 340 NEXT pl%
{JlAn} 350 NEXT rd%
{LjAl} 360 CLS
{IsCx} 370 PEN 1:LOCATE 11,12:PRINT "GAME OVER":RES
       TORE 2040:GOSUB 1910:GOSUB 1420:GOSUB
       1420
{FsAr} 380 GOSUB 1750:GOTO 50
{PnAt} 390 FOR o%=2000 TO 50 STEP -30
{CrAs} 400 SOUND 1,o%,2,15
{KlAs} 410 SOUND 2,o%*2,2,15
{MtAj} 420 NEXT
{FmAx} 430 IF l%=3 THEN bn%=200:GOTO 460
{OvAn} 440 l%=l%-5
{DkAr} 450 bn%=100-(l%*5)
{ExAv} 460 sc(pl%)=sc(pl%)+bn%
{ClCr} 470 IF sc(pl%)<100 THEN PRINT #pl%,"0";USING
       "##";sc(pl%); ELSE PRINT #pl%,USING
       "###";sc(pl%);
{IpAn} 480 GOSUB 1420
{MkAm} 490 GOTO 340
{KpAj} 500 STOP
{MmAn} 510 CLS:PEN 2
{KiAo} 520 LOCATE 1,1
{DsCn} 530 PRINT CHR$(150);STRING$(8,CHR$(154));"MA
       STERWORD!";STRING$(8,CHR$(154));
       CHR$(156)
{LxAp} 540 FOR y%=2 TO 24
{CqAx} 550 LOCATE 1,y%:PRINT CHR$(149)
{BkBi} 560 LOCATE 29,y%:PRINT CHR$(149)
{AuAk} 570 NEXT
{MmBn} 580 PRINT CHR$(147);STRING$(27,CHR$(154));CH
       R$(153);
{HnAl} 590 PEN 1
{OwAn} 600 FOR p%=1 TO 4
{GlAq} 610 LOCATE 32,p%*5
{ElAx} 620 PRINT "Player";USING"#";p%
{BjBo} 630 WINDOW #p%,34,36,2+(p%*5),2+(p%*5):PEN #
       p%,3
{MiAp} 640 PRINT #p%,"000";
{IoAk} 650 NEXT
{JiAs} 660 WINDOW 2,28,2,24
{IxAn} 670 RETURN
{AmAq} 680 RESTORE 810
{HpAj} 690 f%=1
{BlAl} 700 PEN 3
{GrBk} 710 IF f%>7 THEN 730 ELSE READ l$
{KiBi} 720 LOCATE (28-LEN(l$))/2,23:PRINT l$
{HuBk} 730 IF INKEY$<>"" THEN RETURN
{BiAl} 740 PRINT
```

```
{MgAl} 750 PRINT
{GoAm} 760 f%=f%+1
{CtAt} 770 IF f%=7 THEN PEN 1
{PlAq} 780 IF f%=10 THEN 800
{KuAm} 790 GOTO 710
{BjBp} 800 IF INKEY$<>"" THEN RETURN ELSE 800
{FnAx} 810 DATA WELCOME TO MASTERWORD
{MpAt} 820 DATA BY NEIL HOPKINSON
{MoAw} 830 DATA FOR THE AMSTRAD CPC 464
{GpAo} 840 DATA WRITTEN
{CkAo} 850 DATA FOR
{AvAs} 860 DATA AMSTRAD  ACTION
{ElAx} 870 DATA PRESS ANY KEY TO START!
{IuAl} 880 PEN 3
{PoAp} 890 LOCATE 5,11
{IjAv} 900 PRINT "Number of players ?"
{EvAl} 910 PEN 1
{FiAq} 920 LOCATE 12,14
{LkAo} 930 PRINT "(1-4)"
{EnAm} 940 a$=""
{GpAv} 950 WHILE a$="":a$=INKEY$:WEND
{DmAx} 960 IF a$<"1" OR a$>"4" THEN 940
{KuBq} 970 play%=VAL(a$):FOR a%=1 TO 4:sc(a%)=0:NEX
        T:RETURN
{CpAu} 980 FOR q%=3 TO 22 STEP 2
{PmAp} 990 LOCATE 12,q%
{OmAr} 1000 PEN 3:PRINT "*****"
{KxAk} 1010 NEXT
{NjAm} 1020 l%=5
{LnAo} 1030 FOR s%=100 TO 20 STEP -10
{KjAt} 1040 PEN 1:LOCATE 8,l%
{BpBm} 1050 IF s%=100 THEN PRINT "100":GOTO 1080
{LpBl} 1060 IF s%=20 THEN PRINT "000":GOTO 1080
{NpAt} 1070 PRINT "0";USING "##";s%
{PiAq} 1080 LOCATE 18,l%
{CtBn} 1090 IF s%=100 THEN PRINT "100":GOTO 1120
{LlBl} 1100 IF s%=20 THEN PRINT "000":GOTO 1120
{JnAt} 1110 PRINT "0";USING "##";s%
{AmAq} 1120 l%=l%+2:NEXT
{BqAm} 1130 PEN 3
{KuBr} 1140 LOCATE 8,3:PRINT "200":LOCATE 18,3:PRIN
        T "200"
{FaAn} 1150 RETURN
{FkAm} 1160 z$=""
{BaAl} 1170 x%=12
{DaAp} 1180 WHILE x%<>17
{GnAp} 1190 LOCATE x%,l%
{NxAr} 1200 PEN INT(RND*3)+1
{LvAo} 1210 PRINT "?";
{FnAo} 1220 k$=INKEY$
{GkAt} 1230 IF k$="" THEN 1190
{KoAu} 1240 k$=UPPER$(k$):z$=z$+k$
{AnAt} 1250 LOCATE x%,l%:PEN 3
{AkAp} 1260 PRINT k$;
{GtBl} 1270 SOUND 1,1200-(x%*8),9,15,1,1
{LlAp} 1280 x%=x%+1:WEND
{JsAo} 1290 RETURN
{BlAn} 1300 righ%=0
{DxAq} 1310 FOR a%=1 TO 5
{LrAo} 1320 d%(a%)=1
{KkFl} 1330 IF MID$(z$,a%,1)=MID$(w$,a%,1) THEN rig
        h%=righ%+1:PEN 2:LOCATE 11+a%,l%:PRINT
        MID$(z$,a%,1);:SOUND 1,2000(a%*250),9,
        1,1:w$=MID$(w$,1,a%-1)+" "+MID$(w$,a%+1)
        :d(a%)=0
{PiAk} 1340 NEXT
{OlAx} 1350 IF righ%=5 THEN RETURN
{KkAp} 1360 FOR a%=1 TO 5
{KkAw} 1370 IF d%(a%)=0 THEN 1400
{RvAt} 1380 l$=MID$(z$,a%,1)
{CvEq} 1390 ch%=INSTR(w$,l$):IF ch%<>0 AND d%(ch%)
        1 THEN PEN 1:LOCATE 11+a%,l%:PRINT MID$
        (z$,a%,1):w$=MID$(w$,1,ch%-1)+" "+MID$
        (w$,ch%+1)
{GoAk} 1400 NEXT
{DsAo} 1410 RETURN
{AtAv} 1420 FOR a%=1 TO 3000:NEXT:RETURN
{BiAq} 1430 REM Read data.
{PvAp} 1440 RESTORE 1500
{CuAt} 1450 DIM wd$(236),sc(4)
{LiAo} 1460 FOR w=1 TO 236
{RxAq} 1470 READ wd$(w)
{CwAl} 1480 NEXT
{AkAn} 1490 RETURN
{JkFu} 1500 DATA ABACK,ABATE,ABBEY,ABOUT,ACORN,ACTO
        R,ACUTE,ADAPT,AFTER,AGENT,AHEAD,AISLE,
        ALARM,ALBUM,ALIAS,ALIBI,AMAZE,AMBLE
        ,AMONG,AMPLE,ANGEL,ANGER,ANGLE,ANNOY,
        APPLY,ARENA,ARGUE,AUDIT,AWOKE
{IrBs} 1510 DATA BADGE,BANAL,BANDY,BARGE,BASIS,BATH
        E,BATON,BEACH,BEIGE,BELLY,BERET,BIRCH,
        BIRTH,BLACK,BLADE,BLIND,BLOCK,BLOND,
        BLUNT,BOGUS,BRASH,BRAVE,BULLY
{PpDq} 1520 DATA CABIN,CADGE,CAMEL,CANDY,CARRY,CATC
        H,CHAIN,CHEST,CHILL,CHOIR,CHURN,CLASH,
        CLUMP,COUNT,CRATE,CREAM,CRYPT,CYNIC
{OvCj} 1530 DATA DAISY,DEBIT,DELTA,DEMON,DIARY,DITC
        H,DIZZY,DRINK,DROVE,DWELL
{HsBt} 1540 DATA EARTH,EBONY,ELITE,ENVOY,ERODE,EVOK
        E,EXACT,EXERT,EXULT
{EjCl} 1550 DATA FABLE,FANCY,FATAL,FEAST,FEVER,FLAR
        E,FLOUR,FORTH,FRONT,FUNNY,FUZZY
{AqBm} 1560 DATA GLAZE,GRADE,GRAND,GRAIN,GUIDE,GYPS
        Y
{ImBn} 1570 DATA HARSH,HEFTY,HINGE,HOIST,HOTEL,HUSK
        Y
{BlBo} 1580 DATA IDEAL,IDIOT,INDEX,INPUT,ISSUE,IVOR
        Y
{DnAr} 1590 DATA JELLY,JOINT
{HaAt} 1600 DATA KIOSK,KNOCK,KNAVE
{IwCr} 1610 DATA LADEN,LAPSE,LARGE,LATCH,LEASE,LEAS
        H,LEAST,LEMON,LIBEL,LINEN,LIVER,LUNCH
{AwCl} 1620 DATA MAGIC,MANOR,MASON,MEDAL,MELON,MERC
        Y,MERIT,MIMIC,MINOR,MOUTH,MUSTY
{LtBm} 1630 DATA NERVE,NOISE,NORTH,NOVEL,NURSE,NYLO
        N
{NjBw} 1640 DATA OASIS,OCEAN,OFFER,OFTEN,ONION,OPER
        A,ORDER,ORGAN,OVERT
{JqCn} 1650 DATA PAINT,PAPER,PARTY,PAUSE,PERIL,PIAN
        O,PILOT,PITCH,PLATE,POACH,PREEN,PUTTY
{BsBi} 1660 DATA QUACK,QUEEN,QUERY,QUOTA
{OlBs} 1670 DATA RADIO,RALLY,REACT,REIGN,REPEL,RESI
        N,RIGHT,RURAL
{MxDm} 1680 DATA SAINT,SATIN,SAUCE,SCALD,SCENE,SCOR
        E,SCRAP,SHAKE,SHARE,SIGHT,SLOPE,SOLID
        ,SPINE,SPORT,STAND,SUGAR,SWARM
{IqCq} 1690 DATA TABLE,TEASE,TEPID,TERSE,THEME,THIN
        G,THORN,THROW,TOKEN,TOPIC,TRADE,
        TRICK,TWIST
{PwAx} 1700 DATA UNCLE,UNION,UNTIL,USHER
{GoBi} 1710 DATA VALID,VALVE,VERSE,VISIT,VOWEL
{EtBq} 1720 DATA WAIST,WALTZ,WATER,WEAVE,WHOLE,WORS
        T,WRIST,WRONG
{BaAt} 1730 DATA YACHT,YEAST,YOUTH
{BtAo} 1740 DATA ZEBRA
{AiAq} 1750 FOR p%=1 TO play%
{BxAl} 1760 CLS
{PtAt} 1770 PEN 1:LOCATE 11,12
{GwBi} 1780 PRINT "Player";USING "#";p%
{JxAo} 1790 s=sc(p%)
{NmBl} 1800 IF s<=50 THEN c$="A useless score !"
{ClBs} 1810 IF s>=51 AND s<=150 THEN c$="You need p
        ractice!"
{LnBs} 1820 IF s>=151 AND s<=300 THEN c$="An aver
        age score!"
{DlBs} 1830 IF s>=301 AND s<=500 THEN c$="A great s
        core !"
{EsBq} 1840 IF s>=501 AND s<=700 THEN c$="A true pr
        o!"
{NlBk} 1850 IF s>=701 THEN c$="The expert!"
{LpBk} 1860 LOCATE (28-LEN(c$))/2,20:PRINT c$
{LvBk} 1870 GOSUB 1420:GOSUB 1420:GOSUB 1420
{BtAn} 1880 NEXT p%
{NkAo} 1890 RETURN
{GvAr} 1900 RESTORE 1960
{KvBm} 1910 READ tn1:IF tn1=999 THEN RETURN
{DlAr} 1920 READ pa1,dt2
{OuAt} 1930 SOUND 1,tn1,pa1,15
{BiAw} 1940 SOUND 2,dt2,pa1,15,1,1,5
{IoAm} 1950 GOTO 1910
{OwAt} 1960 DATA 358,40,1,379,20,1
{HkAu} 1970 DATA 319,40,1,379,20,10
{MkAv} 1980 DATA 358,20,10,379,20,10
{BkBl} 1990 DATA 1,5,100,1,5,200,1,5,300,1,5,400
{MtAt} 2000 DATA 358,40,1,379,20,1
{FvAv} 2010 DATA 319,40,1,379,20,10
{LtAv} 2020 DATA 358,20,10,379,20,10
{BrBm} 2030 DATA 1,5,100,1,5,200,1,5,300,1,5,400
{AwAx} 2040 DATA 716,40,1,758,40,1
{GtAs} 2050 DATA 851,40,1,956,40,1
{GjBx} 2060 DATA 1,5,900,1,2,1000,1,5,900,1,2,1000,
        ,5,2000,1,2,1000,1,5,1500,1,2,1000
{FrAm} 2070 DATA 999 ●
```

RSX-MAKE

Graeme Rowles

This is a very handy utility that will put machine code programs into the RSX form. It is easy to use and asks you a set of simple questions.

Firstly, it will ask you how many commands there are to be put into RSX form.

Next it asks where the code is to be located, this could be &AF00 or &9000, or anything else you want it to be. Beware: Make sure that you do not go over the machine code you have just programmed. It may be best for example, if your code starts at &9000 and ends at &9127, to type in &9128 to be sure!

Now you will be asked the name of your first command. The names can consist of any combination of letters, numbers and full stops.

All the program needs to know now is the address it starts at. Type it in and the program will repeat the last two steps for each command.

When everything has been completed you will be given an address to CALL. Type this in and your commands are active! If you want to find out where your code ends then type: `PRINT HEX$(loc,4)`.

```
{LaAm} 1 'RSX-MAKE
{PxAq} 2 'By Graeme Rowles
{IxAl} 10 MODE 2
{CmAx} 20 INPUT"How many commands are there";c
{NpAs} 30 DIM com$(c),addr(c)
{MpBm} 40 INPUT"Where is this code to start";code
{CjAp} 50 FOR t=1 TO c
{MxAk} 60 PRINT
{MxAx} 70 PRINT"Enter command number";t;
{NsBr} 80 INPUT"'s name: ",com$(t):com$(t)=UPPER$(c
        om$(t))
```

```
(OpBq) 90 INPUT"Enter the start address of it: ",ad
        dr(t)
(OwAj) 100 NEXT
(BaAq) 110 FOR t=1 TO c
(KoAp) 120 f=LEN(com$(t))
(FkBw) 130 com$(t)=LEFT$(com$(t),f-1)+CHR$(ASC
        (RIGHT$(com$(t),1))+&80)
(DoAk) 140 NEXT
(LlAn) 150 loc=code
(IaCj) 160 POKE loc,0:POKE loc+1,0:POKE loc+2,0:POK
        E loc+3,0:loc=loc+4
(PpAq) 170 h=code:GOSUB 360
(IlBt) 180 POKE loc,&21:POKE loc+1,hr:POKE loc+2,hl
        :loc=loc+3
(IpAr) 190 h=loc+6:GOSUB 360
(GoBm) 200 POKE loc,1:POKE loc+1,hr:POKE loc+2,hl
(AkBq) 210 POKE loc+3,&C3:POKE loc+4,&01:POKE loc+5
        ,&BC
(HwAq) 220 loc=loc+6
(GkBl) 230 h=c*3:h=h+2:h=h+loc:r=h:GOSUB 360
(KpBl) 240 POKE loc,hr:POKE loc+1,hl:loc=loc+2
(CkBl) 250 FOR t=1 TO c:h=addr(t):GOSUB 360
(KkBp) 260 POKE loc,&C3:POKE loc+1,hr:POKE loc+2,hl
(KqAr) 270 loc=loc+3:NEXT
(CtBn) 280 IF r<>loc THEN PRINT"ERROR!":STOP
(JrAp) 290 FOR t=1 TO c
(BvAu) 300 FOR g=1 TO LEN(com$(t))
(BvBm) 310 POKE loc,ASC(MID$(com$(t),g,1)):loc=loc+
        1
(PlAm) 320 NEXT g,t
(CoAj) 330 '
(KiCl) 340 PRINT"Type CALL &";HEX$(code+4,4);" to m
        ake these commands active"
(JmAl) 350 END
(OqBs) 360 h$=HEX$(h,4):hl$=LEFT$(h$,2):hr$=RIGHT$(
        h$,2)
(KnBl) 370 hl=VAL("&"+hl$):hr=VAL("&"+hr$):RETURN ●
```

STAR-DOT

Greg Heslington

It seems that Greg was so intrigued by Andrew Mannings letter in Forum (AA54) challenging programmers to come up with a BBC style *. command that he sat down and wrote one!

For those interested, the routine patches the TXT_OUTPUT jumpblock entry with a call to the Star-Dot routine. The routine then checks to see if a return character is being printed. If it is, and the first two caracters in BASICs input buffer (apart from spaces) are '*.', then CAS_CATALOG it called (after closing the input file).

```
(EnAo) 100 MEMORY &99FF
(BvAp) 110 address=&A200
(IlAp) 120 FOR i=0 TO 10
(BtAu) 130   sum=0:READ code$,check$
(McAr) 140   FOR j=1 TO 23 STEP 2
(DpAx) 150     byte=VAL("&"+MID$(code$,j,2))
(KmAq) 160     POKE address,byte
(PqBo) 170     sum=sum+byte:address=address+1
(AqAm) 180   NEXT j
(HqBv) 190   IF sum<>VAL("&"+check$) THEN PRINT "Er
        ror in line";270+i*10
(MgAk) 200 NEXT i
(JjAp) 210 CALL &A200
(KkBo) 220 PRINT"*. now installed. Go ahead, try it
        !"
(IpBk) 230 PRINT"CALL &A218 disables it."
(CuBj) 240 PRINT"CALL &A200 re-enables it."
(GwAk) 250 END
(BwAk) 260 :
(MlBl) 270 DATA 003BC93200A2AF3218A23A06,3B6
(LlAw) 280 DATA 00FE8028133E8A3256A2180C,3CF
(HvAw) 290 DATA C93EC93218A2AF3200A2181A,471
(FlBk) 300 DATA F33A5A8B327FA22A5B8B2280,577
(RlBk) 310 DATA A23EC3325A8B214DA2225B8B,532
(HwBi) 320 DATA FBC9F33A7FA2325A8B2A80A2,6A5
(KnAx) 330 DATA 225B8BFBC9F5FE0D202CC5D5,6B2
(LnBi) 340 DATA E521A4AC7E23FE2028FAFE2A,65F
(EnBl) 350 DATA 20197EFE2E201436002B363A,2E8
(DkBk) 360 DATA CD3EA2CD7DBC11009ACD9BBC,682
(GoBi) 370 DATA CD24A2E1D1C1F1C9C9000000,689 ●
```

TEN-BARS

Graeme Rowles

Mr Rowles has been very busy indeed this month. His third program adds ten extra commands to BASIC. This is what they do:

|RANDOM, start addr, end addr

Fills all memory locations between the start and end addresses with random numbers.

|POKE, variable$, addr

Pokes the contents of a string variable into a given address in memory.

|MOVE, start, length, start2

Moves a block of memory quickly from start to start2, for the given length of bytes.

|PROTECT, start, end, key

Protects all the area of memory between addresses' start and end. The key number is the important one to remember, or you may loose your most treasured piece of programming!

|UNPROTECT, start, end, key

As above, but de-protects the area of memory between addresses' start and end, as long as you've entered the right key number!

|SAVE, start, length, key

Saves an area of memory to tape very quickly indeed. This can also be thought of as a sort of protection system as there is a key number to be entered, though this is not the idea at all! The main target is to provide a way to save an area of memory in one large block, therefore saving valuable time!

|LOAD, start, length, key

As above, but loads, rather than saves a file.

|MIX

Makes the printer print hash and pound signs together without sending any control codes.

|MIX.OFF

Turns the above function off.

|COLOURS

Resets all screen inks to their original values.

```
(OrAl) 1 'Ten Bars
(OvAn) 2 'By GE Rowles
(BqAm) 3 '7.1.90
(FlBw) 10 MEMORY &8FFF ' stops variables etc being
        placed over code
(MiBj) 20 PRINT:PRINT"Please wait ...":GOSUB 80
(MrAk) 30 CLS
(OwAo)  40 PRINT"Well done !":PRINT
(NiBj) 50 PRINT"|RANDOM, |POKE, |MOVE, |PROTECT,"
(OmBk) 60 PRINT"|UNPROTECT, |SAVE, |LOAD, |MIX"
(MiBt) 70 PRINT"|MIX.OFF and |COLOURS installed.":C
        ALL &9123:END
(FrAx) 80 FOR a=&9000 TO &91A7 STEP 15
(KvAw) 90 tot=0:FOR b=a TO a+&F
(PnBn) 100 READ a$:POKE b,VAL("&"+a$):tot=tot+PEEK(
        b)
(LaCk) 110 NEXT:READ b$:IF VAL("&"+b$)<>tot THEN PR
        INT"Error in data -- Sorry !":PRINT:STOP
(HmAn) 120 NEXT:RETURN
(ClBv) 130 DATA FE,02,C2,83,91,DD,66,03,DD,6E,02,DD
        ,56,01,DD,5E,07D8
(MwBu) 140 DATA 5E,00,ED,5F,47,ED,5F,80,77,23,7C,BA
        ,20,F4,7D,BB,07D9
(KwBt) 150 DATA BB,C8,18,EF,00,FE,02,C2,83,91,DD,66
        ,03,DD,6E,02,07F3
(RtBv) 160 DATA 02,DD,56,01,DD,5E,00,7E,23,4E,23,46
    ,C5,E1,4F,06,05C4
(HnBv) 170 DATA 06,00,ED,B0,C9,00,FE,03,C2,83,91,DD
        ,66,05,DD,6E,07D6
(JwBw) 180 DATA 6E,04,DD,46,03,DD,4E,02,DD,56,01,DD
        ,5E,00,ED,B0,06D1
(IjBw) 190 DATA B0,C9,00,FE,03,C2,83,91,DD,66,05,DD
        ,6E,04,DD,56,081A
(ErBx) 200 DATA 56,03,DD,5E,02,DD,4E,00,7E,81,77,23
        ,7C,BA,20,F8,06A8
(GpBw) 210 DATA F8,7D,BB,20,F4,C9,00,FE,03,C2,83,91
        ,DD,66,05,DD,0909
(OkBt) 220 DATA DD,6E,04,DD,56,03,DD,5E,02,DD,4E,00
        ,7E,91,77,23,0696
(KkBv) 230 DATA 23,7C,BA,20,F8,7D,BB,C8,18,F3,00,FE
        ,03,C2,83,91,0853
(ApBx) 240 DATA 91,DD,66,05,DD,6E,04,DD,56,03,DD,5E
        ,02,DD,7E,00,06F6
(GqBu) 250 DATA 00,C3,9E,BC,00,FE,03,C2,83,91,DD,66
        ,05,DD,6E,04,07BB
(NuBs) 260 DATA 04,DD,56,03,DD,5E,02,DD,7E,00,C3,A1
        ,BC,00,21,E2,06F5
(NxBw) 270 DATA E2,90,3E,C3,32,2B,BD,7D,32,2C,BD,7C
        ,32,2D,BD,C9,0786
(GpBv) 280 DATA C9,FE,A3,28,07,FE,23,28,0F,CF,F2,87
        ,CD,04,91,3E,07D9
(BnCi) 290 DATA 3E,03,CD,EA,90,3E,A3,18,F1,CD,04,91
        ,AF,CD,EA,90,08CA
(FkBv) 300 DATA 90,3E,23,18,E6,3E,1B,CD,EA,90,3E,52
        ,18,DD,00,3E,0652
(NnCj) 310 DATA 3E,CF,32,2B,BD,3E,F2,32,2C,BD,3E,87
        ,32,2D,BD,C9,071C
(JwBt) 320 DATA C9,00,FC,A6,2C,91,21,1F,91,01,2C,91
        ,C3,D1,BC,4C,0753
(LvBq) 330 DATA 4C,91,C3,00,90,C3,23,90,C3,42,90,C3
        ,5D,90,C3,7F,082D
(HqBu) 340 DATA 7F,90,C3,A1,90,C3,B9,90,C3,D1,90,C3
        ,0E,91,C3,02,095A
(FpBw) 350 DATA 02,BC,52,41,4E,44,4F,CD,50,4F,4B,C5
        ,4D,4F,56,C5,0665
(IjBu) 360 DATA C5,50,52,4F,54,45,43,D4,55,4E,50,52
        ,4F,54,45,43,05D6
(NpBx) 370 DATA 43,D4,53,41,56,C5,4C,4F,41,C4,4D,49
        ,D8,4D,49,58,06C2
(PrBu) 380 DATA 58,2E,4F,46,C6,43,4F,4C,4F,55,52,D3
        ,21,90,91,7E,0648
(KpBv) 390 DATA 7E,FE,40,C8,23,CD,5A,BB,18,F6,00,20
        ,50,61,72,61,073B
(JaBv) 400 DATA 61,6D,65,74,65,72,20,65,72,72,6F,72
        ,20,21,07,40,0550
(JtBo) 410 DATA 40,00,00,00,00,00,00,00,00,00,00,00
        ,00,00,00,00,0040 ●
```

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CHEAT MODE

Quite a few things have come to light this month that have been causing a number of heads (mainly mine) to ache.

You know the feeling – suddenly everything you thought you could rely on turns out to be wrong!

Firstly, you must have noticed that when a game is re-released on a compilation, or as a budget, and you whip out an old *AA* with the very cheat you want, after spending an age typing it in the thing usually refuses to work! Pretty frustrating, eh?

There are two problems:

- The new version may have a different protection system. Cheat routines are very specific and need to find exactly what they are looking for. This explains why tape pokes will not generally work on disk and vice-versa.
- Alternatively, the game, which will have been stored as source code (assemblylanguage), is re-assembled to a different postion in the memory when re-issued, meaning that the actual poke address isn't where it was before.

As mentioned last month, this even appears to be the case with some tape/disk versions of the same game. Encore's *Space Harrier* is one of these. For some reason, the main code is 6 memory locations adrift when compared with the original.

Just as annoying, some Multiface owners are having trouble getting pokes that lie between 2000 and 4000 to work. This is because, when initiated, the Multiface positions its OWN code in this area and NOT that of the game.

At the bottom right of the Multiface menu you will see a *, this tells you that the Multiface's own code is accessible. To replace it with game code, press key 29 (with a * on it). The * will disappear from the menu and the game code becomes available.

Lastly, tape pokes sometimes include their method of use (either METHOD 1 or METHOD 2). Unless otherwise stated, treat all tape pokes as METHOD 1, which is:

1) Type in the poke.
2) Save the poke to tape/disk.
3) If you own a 664 or 6128 type |TAPE.
4) Run the poke by typing RUN. (Do not type RUN "" or press CTRL+ENTER)
5) Put fully rewound game tape into cassette deck.
6) Press PLAY and any key (not ESC>.

Remember, the codes before the line numbers are produced by the TYPEWRITER program and should not be typed in.

That should get you up and running. If any pokes come along which use a different method, I'll be sure to explain them. But for now – on with the show.

Supertank

Shove in this *Supertank* poke from Andy Price of Dunstable, then simulate away to your heart's content. It's a tape routine that does just about everything except move the joystick for you.

Remove any of the pokes you don't want (lines 90-210).

```
{JwAt} 1 ' Supertank Simulator
{JsAq} 2 ' by Andrew Price
{BxAq} 3 ' Amstrad Action
{ExAs} 4 ' Infinite lives
{BzAs} 10 ' ** LEAVE - PATCH **
{BvAu} 20 DATA 2A,38,BD,E5,AD,E1
{MoAu} 30 DATA 22,6A,BE,AC,21,37
{KlAu} 40 DATA BD,3E,C3,77,23,3E
{FtAt} 50 DATA 23,77,3E,BE,23,77
{LtAs} 60 DATA 21,40,00,E3,11,00
{GuAr} 70 DATA BB,00,C3,4A,3A
{EnAo} 80 ' ** POKES **
{GpAt} 90 ' Complete stage 1 of
{MtAw} 100 ' each level in deploy ship
{DoAv} 110 DATA AF,E5,21,16,2A,77,E1
{KiAr} 120 DATA AF,A7,32,54,2A
{MoAw} 130 ' Invulnerable after 1st life
{MmAq} 140 DATA AF,A7,32,54,2A
{MnAp} 150 ' nothing fires back!
{LkAu} 160 DATA D5,E5,AF,11,20,90
{EjAr} 170 DATA EB,77,E1,D1
{GuAr} 180 ' turns off music
{NpAw} 190 DATA AF,32,5F,A2,32,44,A2
{KmAv} 200 ' 1 shot only needed to kill
{IrAt} 210 DATA A7,AF,32,28,99
{IaAs} 220 ' ** LEAVE **
{EvAt} 230 DATA 11,5C,BE,21,4E,38
{DiAr} 240 DATA A7,CF,00,00,ANDY
{ItAr} 250 FOR ad1=&BE00 TO &BE22
{JwAu} 260 READ a$:a=VAL("&"+a$)
{FaAu} 270 c=c+a:POKE ad1,a:NEXT
{FuAw} 280 IF c<>&DFD THEN 330
{IkAp} 290 ad2=&BE23:c=0
{KkBj} 300 READ a$:IF a$="ANDY" THEN 350
{KnAs} 310 POKE ad2,VAL("&"+a$)
{GnAt} 320 ad2=ad2+1:GOTO 300
{AkAx} 330 PRINT"Error in Patch..check"
{NlAu} 340 CALL &BB18:MODE 2:LIST
{KkAw} 350 ad2=ad2-2:ad2=ad2-&BE00
{HxAw} 360 POKE &BE07,ad2:f=PEEK(&BD39)
{GpAv} 370 POKE ad2,f:f=PEEK(&BD38)
{MpAn} 380 POKE ad2+1,f
{MsBj} 390 MEMORY &3A42:LOAD"":CALL &BF00
```

Lord of the Rings

Lothlorien was never like this! Graham evens up the odds a bit (a million to one in our favour). The one ring now passes out of the town of Street into the world of mortal men.



```
{KxAq} 1 ' Elven Warrior -tape-
{BxAq} 2 ' By Graham Smith
{BpAv} 3 ' Infinite health,keys
{DtAq} 4 ' and arrows
{JtAm} 5 ' Method 1
{FvAj} 6 '
{OlAt} 10 DATA c4,14,ac,af,32,32
{MqAt} 20 DATA 13,32,df,18,32,28
{JnAt} 30 DATA 1b,fb,c9,3a,8f,32
{KGAy} 40 DATA 7f,41,3e,b3,32,cc
{ExAt} 50 DATA 41,21,62,46,36,92
{KlAt} 60 DATA 2b,36,c3,2b,36,df
{DvAp} 70 DATA c3,05,42
{BsAt} 80 FOR j=0 TO 38:READ a$
{GtAt} 90 x=VAL("&"+a$):y=y+x
{KpAt} 100 POKE j+48640,x:NEXT j
{BkAs} 110 IF y<>3807 GOTO 140
{AkAs} 120 MEMORY &3FFF:LOAD"
{BxAp} 130 CALL 48655
{DkAq} 140 PRINT"data error
```

Frankenstein Junior

Frankenstein was originally written by Mary Shelly. She was married to the poet Percy Shelly, who knew the flamboyant romantic Lord George Byron. He was maltreated, as a child, by his mother, who amazingly, used to live up the road from me. Synchronicity or what...?

Unbind Prometheus with Andy's handy tape poke.

```
{CuAr} 1 ' Frankenstein Jnr
{JsAq} 2 ' by Andrew Price
{FoAr} 3 ' Amstrad Action!!
{NpAs} 10 DATA 2A,38,BD,E5,AC
{BrAr} 20 DATA E1,22,2B,BE,AB
{ArAt} 30 DATA 21,37,BD,3E,C3
{JjAt} 40 DATA 77,23,3E,23,77
{CoAu} 50 DATA 3E,BE,23,77,21
{FoAq} 60 DATA 40,00,E3,11,00
{EvAr} 70 DATA BB,C3,4A,3Â,AF
{LtAq} 80 DATA 32,C0,70,EE,41
{JwAr} 90 DATA EE,50,CF,00,00
{DmAt} 100 MEMORY &3A42:LOAD""
{NvAp} 110 FOR a=&BE00 TO &BE2C
{CiAw} 120 READ b$:b=VAL("&"+b$)
{ExAs} 130 c=c+b:POKE a,b:NEXT
{JtAu} 140 IF c<>&1309 THEN 160
{CrAo} 150 CALL &BE00
{IxAt} 160 PRINT"Data Error!!"
```

Multiface poke to remove ghosts

Address = 70C0 Poke = 00

Classic Arcadia

Take a tip from Street Starfighter Smith and cheat like mad. All three games get infinite lives. 'Never did like those space invaders anyway, I think it's the way they walk.

```
{PoAt} 1 ' Classic Arcadia - tape-
{BnAq} 2 ' By Graham Smith
{KeAs} 3 ' Infinite lives
{JsAm} 4 ' Method 1
{FuAj} 5 '
{ErAq} 10 a=48640:MODE 1
{CsAs} 20 FOR j=0 TO 63:READ a$
{EnAt} 30 x=VAL("&"+a$):y=y+x
{JsAq} 40 POKE j+a,x:NEXT j
{KiAs} 50 IF y=7009 THEN CALL a
{KxAp} 60 PRINT"data error
{AnAr} 70 DATA 06,00,11,44,44,cd
{HoAt} 80 DATA 77,bc,eb,cd,83,bc
{NrAt} 90 DATA e5,cd,7a,bc,e1,3e
{LpAt} 100 DATA 01,bc,20,08,01,af
{MpAt} 110 DATA c2,ed,43,e9,09,e9
{OxAu} 120 DATA 01,2c,be,ed,43,ca
{MwAu} 130 DATA 00,0e,38,ed,43,12
{NmAt} 140 DATA 74,e9,af,67,6f,32
{OpAt} 150 DATA 21,54,22,22,54,c3
{PsAs} 160 DATA 00,42,3e,b7,32,8d
{GrAr} 170 DATA 38,c3,00,20
```

Multiface poke for rapid fire:

Address = 1295 Poke = 0

Space Harrier

Here's that cheat for Encore's budget *Space Harrier*, probably one of the best programs in the world... Avoid thumb-death, plus, press P to pause the game then + to restart and you will get another life, over and over again. Check out the secret writing on the loading screen.

```
{GsAq} 1 'Space Harrier
{BnAp} 2 'Encore tape
{GsAo} 3 'rapid fire.
{PvAj} 6 '
{MzAs} 10 DATA c2,20,04,3e,03,cd
{GlAt} 20 DATA 75,06,cb,67,28,0b
{DgAt} 30 DATA 3a,0d,06,fe,39,28
{MkAt} 40 DATA 04,3c,32,0d,06,c9
{AiAs} 50 DATA 21,35,0d,36,c3,23
{OlAs} 60 DATA 36,00,23,36,01,af
{EsAv} 70 DATA 32,95,12,c3,b6,03
{IrAs} 80 y=0:OPENOUT "W"
{GaAo} 90 MEMORY &380
{JxAq} 100 FOR x=&100 TO &129
{GvAu} 110 READ a$:a=VAL("&"+a$)
{DkAu} 120 POKE x,a:y=y+a:NEXT
{PwAt} 130 IF y<>&BE1 THEN 170
{FjAr} 140 MODE 0:LOAD "!screen"
{MsAs} 150 LOAD "!block",&3B6
{JrAo} 160 CALL &118
{LnAr} 170 PRINT"data error!
```



P47 THUNDERBOLT

With the glorious graphics of *P-47 Thunderbolt* who needs an Amiga? (who wants to be a millionaire?). What's more, they get better and better. To view all that parallaxed technicolour, type ZEBEDEE into the hi-score table, then its chocks away chaps, and into the sunset.



Beyond the Ice Palace

Another Encore game with an updated poke is *Beyond the Ice Palace*, especially for Asif Chaudhry of East Acton who is having trouble – and who can blame him? (I hope you have the Encore version, Asif. The original poke was printed in *AA40* and is slightly different.) What you get is infinite spirits and invulnerability.

```
{FuAv} 1 ' Beyond the Ice Palace-tape
{NkAn} 2 ' by Wally
{BxAq} 3 ' Amstrad Action
{ApAt} 10 MODE 1:y=0:MEMORY &9FFF
{CgAs} 20 FOR x=&A130 TO &A14B
{AvAu} 30 READ a$:a=VAL("&"+a$)
{FvAt} 40 y=y+a:POKE x,a:NEXT
{HxAr} 50 IF y<>&9DA THEN 150
{BtAn} 60 LOAD "ice"
{HkAq} 70 POKE &A0E9,&30
{EnAq} 80 POKE &A0EA,&A1
{KnAo} 90 CALL &A000
{OwAt} 100 DATA 3e,a7,32,38,0d,3e
{EvAt} 110 DATA c9,32,34,ff,3e,00
{BzAv} 120 DATA 32,75,e7,3e,c9,32
{IiAt} 130 DATA d3,0e,3e,00,32,29
{DkAq} 140 DATA cf,c3,00,01
{CnAs} 150 PRINT "data error!"
```

Multiface pokes

Address	Poke
0D38	A7
0ED3	C9
CF32	00
E77F	00
FF34	C9

LASER SQUAD

[illegible]



1) [illegible]

Deploy three men on the left of the house, and two on the right as near to the doors as possible. As soon as you can, let off a grenade at the right side of the house, this should take out two combat droids. Do the same with the left side. Make sure you have a rocket launcher with lots of rockets available on the left and give Sterner & co. a fine firework display. Use snap shots so that you can re-load the same go, but aim if you see Sterner. It's advisable to have a Marsec gun handy on the left for opportunity fire.

2) [illegible]

Split up into two groups of four, each having one bloke with a Marsec auto-gun and the remainder full of grenades. Start at the middle top and bottom right. Open the first doors you see, and clear the rooms with grenades. Nick the weapons from the dead enemies, especially the Marsec auto-guns. Use grenades to guarantee a killing (if there are several enemy together). Take care , and stop before going around each corner, especially if you are near the centre. It's easier to wipe out the enemy than it is to wipe out the databanks, so, if there is only one of them left, hunt him down.

Supertank Simulator

Got *Supertank Simulator* but don't like to type in long pokes? Then this is for you. Press ESC to pause the game then type STANK (that's the name of the game, not a comment on it!) then ESC to return, and you have infinite lives. Thanks J Falcus of Optimus software, you're a fine chap